THE LANCET.

No. 4410. Vol. CLXXIV. LONDON, SATURDAY, MARCH 7, 1908. [Pp. 120+48.

CONTENTS.

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HUNTERIAN LECTURES on the Surgery of the Spinal Cord and its Membranes. Delivered before the Royal College of Surgeons of England By DONALD J. ARMOUR, M.B. Tor., F.R.C.S. Eng., Hunterian Professor of Surgery and Pathology; Surgeon to Belgrave Hospital for Children; Assistant Surgeon to the National Hospital for the Paralysed and Epileptic, and to the West London Hospital. Lecture I. (delivered on Feb. 24, 1908) 693

AN ADDRESS on the Diatheses: the Personal Factor in Disease. Delivered in French before the Faculty of Medicine of Paris on Feb. 18th, 1908, by Sir DYCE DUCKWORTH, M.D. Ed., LL.D. Ed., F.R.C.P. Lond., Consulting Physician to St. Bartholomew's Hospital, London, and the Italian Hospital, Queen-sq., London; Senior Physician to the Seamen's Hospital, Greenwich ... 699

A CLINICAL LECTURE on a Case of Aortic Aneurysm with Extensive Arterial Disease. Delivered at the West London Post-Graduate College by SEYMOUR TAYLOR, M.D. Aberd., F.R.C.P. Lond., Physician to the West London Hospital; Honorary Consulting Physician to the Hounslow Hospital, &c.—(*Illustrated*) ... 702

ORIGINAL ARTICLES.

A Case of Wertheim's Hysterectomy for Advanced Carcinoma of the Cervix. By ARTHUR H. N. LEWERS, M.D. Lond., F.R.C.P. Lond., Obstetric Physician to the London Hospital. (*Illustrated*) 704

Hernia of the Iliac Colon. By R. ATKINSON STONEY, F.R.C.S. Irel., Visiting Surgeon to the Royal City of Dublin Hospital and late Chief Demonstrator of Anatomy, School of Physic, Trinity College, Dublin 706

The Pathology and Etiology of Intussusception from the Study of 1000 Cases. By DUNCAN C. L. FITZWILLIAMS, Ch.M. Edin., F.R.C.S. Eng., Demonstrator in Anatomy, King's College; Clinical Assistant, Surgical Out-patients, West London Hospital and the Hospital for Sick Children, Great Ormond-street.—(*Illustrated*).—(*Concluded*) ... 709

Seven Years' Experience of the Finsen Treatment. By JAMES H. SEQUEIRA, M.D. Lond., F.R.C.P.L., F.R.C.S. Eng., Physician to the Skin Department and Lecturer on Dermatology at the London Hospital; in Charge of the Queen Alexandra's Light Department for the Treatment of Lupus 713

A Case of Egg Poisoning. By ALFRED T. SCHOFIELD, M.D. Brux., M.R.C.S. Eng., L.R.C.P. Lond. 716

Motoring Notes. By C. T. W. HIRSCH, M. R. C. S. Eng., L.R.C.P. Lond. 738

CLINICAL NOTES:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

Warning against the Indiscriminate Use of the Ophthalmo-Reaction (Calmette) in the Diagnosis of Tubercle. By A. MAITLAND RAMSAY, M.D. Glasg., Surgeon, Ophthalmic Institution, and Consulting Ophthalmic Surgeon, Royal Infirmary, Glasgow ... 716

Note on a Case of Poisoning by Gelsemium. By JOHN BELL, L.R.C.P. Lond., M.R.C.S. Eng., Superintendent of the Government Civil Hospital, Hong-Kong 717

MEDICAL SOCIETIES.

ROYAL SOCIETY OF MEDICINE:

MEDICAL SECTION:—Acute Suffocative Catarrh. — A Case of Acute Ulcerative Colitis 717

THERAPEUTICAL AND PHARMACOLOGICAL SECTION:—Therapeutics of Diet 718

DERMATOLOGICAL SECTION:—Exhibition of Cases 718

SOCIETY OF TROPICAL MEDICINE AND HYGIENE:

Kala-azar 719

LIVERPOOL MEDICAL INSTITUTION:

Cholecystitis 719

ROYAL ACADEMY OF MEDICINE IN IRELAND:

Exhibition of Specimens 720

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY:

Cæsarean Section 721

GLASGOW MEDICO-CHIRURGICAL SOCIETY:

Treatment of Diabetes 721

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY:

Treatment of Tuberculous Disease of Bone in Children... 721

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY:

Uterine Hæmorrhage as a Sign of Disease 722

REVIEWS AND NOTICES OF BOOKS.

The New Sydenham Society. Atlas of Clinical Medicine, Surgery, and Pathology: a Continuation of the Atlas of Pathology. Edited under the direction of the Council by Jonathan Hutchinson, F.R.S., LL.D. 722

Surgical Applied Anatomy. By Sir Frederick Treves, Bart., G.C.V.O., C.B., F.R.C.S. Eng. Fifth Edition, Revised by Arthur Keith, M.D. Aberd., F.R.C.S. Eng. 723

A Manual of Surgery. By Francis T. Stewart, M.D. 723

Précis d'Electricité Médicale. By Dr. E. Castex 723

The Operations of Surgery. By W. H. A. Jacobson, M.Ch. Oxon., F.R.C.S. Eng.; and R. P. Rowlands, M.S. Lond., F.R.C.S. Eng. Fifth Edition... 723

A Manual of Prescribing for Students and Practitioners of Medicine. By C. R. Marshall, M.D. Vict. 724

First Aid to the Injured and Sick. By F. J. Warwick, M.B. Cantab., M.R.C.S. Eng., and A. C. Tunstall, M.D. Edin., F.R.C.S. Fifth Edition 724

A Short Manual for Monthly Nurses. By Chas. J. Cullingworth, M.D. Durh., F.R.C.P. Lond. Sixth Edition 724

Practical Medicine Series. Vol. v., Obstetrics. Edited by Joseph B. de Lee, A.M., M.D. 724

The World's Classics 724

Cantor Lectures on the Theory of the Microscope. By Conrad Beck, F.R.M.S. 725

The Quarterly Journal of Medicine 725

NEW INVENTIONS.

A New Form of Pessary intended to be used in cases of Procidentia Uteri. — (*Illustrated*) 726

Hartmann's Iodised Catgut 726

A New Pattern of Clinical Thermometer.—(*Illustrated*).. 726

LEADING ARTICLES.

THE PHYSICAL CONDITION OF THE ARMY AND THE NATION... 727

PROPOSED NEW HOSPITAL FOR MENTAL DISEASES 728

ENTERIC FEVER AND FLIES IN NEW YORK 729

ANNOTATIONS.

The General Medical Council: Meeting of the Executive Committee 730

The Royal Commission on Whisky 730

Tripe 731

The Metropolitan Water-supply 731

The King Edward VII. Sanatorium 732

The Royal Society of Medicine.. 732

The "Bacillus Carriers" of Enteric Fever 732

Crossing the Streets 733

When to Operate in Gastric Ulcer 733

The Recent State Trial in Italy.. 734

The Keeping Properties and Dosage of Liquid Extract of Ergot 734

Lady Minto's Indian Nursing Association 735

The Nervous Manifestations of Arterio-sclerosis 735

Artificial Nauheim Baths 736

Scottish Poor-law Medical Officers' Association 736

Old and New Gynæcology 736

The International Congress on Tuberculosis, Washington..... 737

A Murmur in the Internal Mammary Vein 737

LOOKING BACK.

(From THE LANCET, Saturday, March 6th, 1830.)

Remarkable Case of Hereditary Monstrosity 743

VITAL STATISTICS:

Health of English Towns 744

Health of Scotch Towns..... 744

Health of Dublin 744

SPECIAL ARTICLES.

The British Medical Benevolent Fund 739

Medicine and the Law; Notification of Births Act, 1907 739

Alleged Case of Cocaine Poisoning at Slough..... 740

The Services 745

The Organisation of the Medical Profession in France 747

Birmingham 748

Manchester..... 749

Wales and Western Counties Notes..... 750

Scotland 751

Ireland 752

Paris 752

Switzerland..... 753

Italy 753

Vienna 754

CORRESPONDENCE.

Anomalous Reactions given by Fehling's Solution in Testing Urine for Sugar (Dr. Hugh MacLean)..... 745

Milk-supply (Mr. Cecil Revis) ... 746

New Zealand and Public Health 746

An Old Medical Book (Mr. Fred W. Wheeler) 761

OBITUARY.

Friedrich von Esmarch, Professor of Surgery in the University of Kiel 755

Augustus Constable Maybury, D.Sc. Lond., M.R.C.S. Eng., L.S.A., D.P.H., F.G.S., Associate Royal School of Mines... 755

Henry F. Marley, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. 756

Geo. Money Swinhoe, L.R.C.P. Lond., M.R.C.S. Eng. 756

MEDICAL NEWS.

The Cancer Hospital 702

St. John Ambulance Association 730

Donations and Bequests 747

Pass-lists of the University of Cambridge and Trinity College, Dublin 756

Middlesex Hospital 756

University College, Bristol 757

University College, London 757

Literary Intelligence 757

Chelsea Clinical Society..... 757

Bristol Medical Dramatic Club.. 757

Medical Sickness and Accident Society 757

Queen Charlotte's Lying-in Hospital 757

PARLIAMENTARY INTELLIGENCE.

Notes on Current Topics 757

House of Commons..... 758

Appointments 759

Vacancies..... 760

Births, Marriages, and Deaths... 760

Notes, Short Comments, and Answers to Correspondents... 761

Medical Diary 762

Acknowledgments of Communications..... 764

FOR INDEX TO ADVERTISEMENTS SEE PAGES 2 & 4.

INDEX.

MEDICAL AND OTHER BOOKS AND PUBLICATIONS.

COVER.

PAGE

BAILLIERE, TINDALL, & COX:—
Bianchi .... Psychiatry 1
Blumfeld.... Anæsthetics 1
Eccles ..... Hernia 1
" ..... Imperfectly Descended Testis 1
McKisack .. Dictionary of Medical Diagnosis 1

BLAKELEY:—
Fenwick .... Uterine Fibroids 1
" .... Common Complaints of Women 1
Leaf ..... Diseases of the Rectum and Anus 1

CASSELL & CO.:—
Luff ..... Gout 1

CHURCHILL, J. & A.:—
Parsons .... Diseases of the Eye 1
Taylor, J. .. Paralysis, &c. 1

GLAISHER:—
Herschell .. Cancer of the Stomach 1
Savill ..... Neurasthenia 1
" ..... Lectures on Hysteria .. 1

LEWIS:—
Roth ..... Curvature of the Spine 1

MACMILLAN & CO.:—
Tubby & Jones..... Surgery of Paralyses .. 1

MEDICAL PUBLISHING CO.:—
Curtis ..... Liver Abscesses 1
Lane ..... Cleft Palate and Hare Lip 1
" ..... Treatment of Fractures 1
" ..... Chronic Constipation .. 1

PULMAN & SONS:—
Stephenson.. Ophthalmia Neonatorum 1

PAGE

SAUNDERS COMPANY:—
Saunders' New Editions of Leading Medical Books 1

WRIGHT & CO. (BRISTOL):—
Index of Treatment 1

MEDICAL LIBRARIES, &c.:—
O'Connor Extension Co.—
Mechanical Orthopædics 11

ASH, SONS & CO.:—
Hewitt ..... Nitrous Oxide, &c. 6

BAILLIERE, TINDALL & COX:—
Bigg ..... Cancer 8
Bradford & Lovett .... Orthopædic Surgery.... 5
Campbell.... Treatment 5
Crook ..... High Frequency Currents 5
Fagge ..... Pocket Anatomy 5
French ..... Medical Laboratory Methods and Tests 5
Laveran & Mesnil .... Trypanosomes, &c. 5
Ouvrtag .... Meat Inspection..... 5
Starr ..... Nervous Diseases 5
Sutherland.. Blood-stains..... 5
Walsh ..... Rontgen Rays 5
Williams.... Minor Maladies 5

BALE, SONS, & DANIELSSON:—
Harrison .... The Urethrotomies 10

BRYCE:—
Kocher..... Text-book of Operative Surgery 10

CASSELL & CO.:—
Bruce ..... Materia Medica, &c..... 6
Gould ..... Surgical Diagnosis 6
Herman .... First Lines in Midwifery 6
Hutchinson.. Syphilis 6
Luff & Page Manual of Chemistry .. 6
Morris, M. .. Diseases of the Skin 6

PAGE

CASSELL & CO.—(Continued).
Morris, M., & Dore ..... Light and X-Ray Treatment of Skin Diseases 6
Treves, Sir F. Surgical Applied Anatomy 6
Whitelegge & Newman Hygiene, &c. 6
Yeo ..... Medical Treatment 6

CHURCHILL, J. & A.:—
Cripps ..... Ovariotomy and Abdominal Surgery 10

GLAISHER:—
Special Offer 8

GRIFFIN & CO.:—
Brooke..... Tropical Medicine, &c. 10
Davies ..... Handbook of Hygiene.. 10
West ..... Organs of Respiration.. 10

LEWIS:—
Lewers..... Diseases of Women 10
" ..... Cancer of the Uterus .. 10

LONGMANS, GREEN & CO.:—
Dockrell's Atlas of Dermatology 8
Goodsall & Miles .... Diseases of the Anus and Rectum 8

MACMILLAN & CO.:—
Ballance .... Surgery of the Brain .. 8
Lockwood .. Appendicitis..... 8

NISBET & CO.:—
Bland-Sutton .... Gall-Stones, &c..... 5
Nisbet's Medical Directory for 1908 .. 5
Robson..... Cancer of the Stomach 5
Sherren .... Injuries of Nerves and their Treatment 5

PENTLAND, Y. J.:—
Lockwood .. Aseptic Surgery 8
" .. Cure of Hernia, &c. 8

RENSHAW:—
Wood ..... Application of Trusses 8

PAGE

SAUNDERS COMPANY:—
Anders ..... Practice of Medicine .. 9
Moynihan .... Abdominal Operations.. 9
Scudder .... Fractures 9
Stelwagon .. On the Skin..... 9

SMITH, ELDER & CO.:—
Barnes ..... Midwifery for Midwives 7
Chance..... Bodily Deformities 7
Cheadle .... Artificial Feeding 7
Clinical Manual for the Study of Medical Cases 7
Dictionary of National Biography... 7
Ellis ..... Demonstrations of Anatomy 7
Juler..... Ophthalmic Science, &c. 7
Keetley .... Orthopædic Surgery.... 8
" .... Gastric Ulcers 8
" .... Complicated Fractures 8
Lawson .... Diseases of the Eyes 7
Leftwich.... Index of Symptoms 7
Marshall .... Vertebrate Embryology 7
Marshall & Hurst .... Practical Zoology 7
Schäfer .... Practical Histology 7
Tirard ..... Albuminuria, &c. 6

WILLIAMS & NORGATE:—
Stephens & Christophers Practical Study of Malaria 6

WRIGHT & CO. (BRISTOL):—
Dowse ..... Massage and Electricity 8
First Aid Wall Diagrams 8
Hall ..... Medical Examination for Life Assurance.... 8
Maddox .... Ophthal. Prisms, &c.... 8
Schlesinger.. Indications for Operation 8
Warwick & Tunstall .. First Aid to the Injured and Sick 8

MEDICAL LIBRARIES, &c.:—
Baker—Barrains in Books 10
Bazaar, Exchange & Mart 10
Behnke—Stammering 10
Seymour—How to Speak Effectively.. 10

OFFICIAL AND GENERAL ANNOUNCEMENTS.

APPOINTMENTS VACANT:—
Bedford County Hospital 81
Birmingham and Midland Hospital for Skin, &c., Diseases 82
Borough of Bromley Education Committee 82
Borough of Merthyr Tydfil 83
Bradford Royal Infirmary 81
Bucks County Council Education Committee 82
Bucks County Lunatic Asylum 82
Cardiff Infirmary 83
City and County of Norwich..... 82
City of London Hospital for Diseases of the Chest 81
City of London Lying-in Hospital 82
County Analyst, Worcester 81
Coventry and Warwickshire Hospital 82
Cumberland Infirmary, Carlisle 82
Devon County Asylum, Exminster.... 83
Dumfries and Galloway Royal Infirmary..... 82
Hampshire County Council 82
Hampstead General Hospital 83
Hastings, St. Leonards, and East Sussex Hospital 83
Ingham Infirmary, &c., South Shields 82
Kidderminster Friendly Societies' Medical Aid Association 83
Leyton, Walthamstow, &c., Children's General Hospital..... 81
Liverpool Infirmary for Children 81
London Fever Hospital, Liverpool-road 81
London Temperance Hospital 81
Lowestoft Hospital 83
Metropolitan Hospital, Kingsland-road 81
Norfolk County Asylum, Thorpe 8
North Riding Lunatic Asylum, York 83
Rotherham Hospital and Dispensary 83
Royal Free Hospital, Gray's Inn-road 83
Royal National Orthopædic Hospital 81
Royal Victoria Eye and Ear Hospital, Dublin..... 83
Salford Royal Hospital 82
South Devon and East Cornwall Hospital, Plymouth 81
St. Bartholomew's Hos., Rochester .. 81
St. Mary's Hospital Medical School, Paddington..... 81
St. Mary's Hospital, Paddington..... 83
Sussex County Hospital Brighton.... 81
Urban District of Pinchley 83
Warneford, Leamington, &c., Hospital 83
West London Hospital, Hammersmith-road 82
Westminster General Dispensary 82

ASSISTANCIES, MEDICAL 90

ASYLUMS, HOMES, &c.:—
Ashwood House, Kingswinford 74
Bailbrook House, Bath 74
Barnsley Hall, Bromsgrove 74
Barrwood House Home 75
Blackheath Invalid Home..... 80

ASYLUMS—(Continued).
Bogle, Bordighera 80
Buntingford House Retreat, Buntingford 78
Camberwell House, Peckham-road.... 74
Cheadle Royal 74
Clarence Lodge, Clapham-park 80
Coppice, The, Nottingham 75
Crooksbury Sanatorium, Surrey 77
Dadson Nursing Home 80
Dalrymple House, Rickmansworth .. 77
Dartmoor Sanatorium 77
David Lewis Colony, Alderley Edge.. 79
Dinsdale Park, near Darlington 80
Earlswood Asylum, Redhill 77
East Anglian Sanatorium, Nayland .. 78
Fairford Retreat, Gloucestershire 74
Flower House, Catford..... 75
Ghyll Retreat, Cockermouth 78
Grove House, Church Stretton 15
Grove, The, Catton, Norwich 75
Hartington Nursing and Convalescent Home, Bournemouth 80
Haydock Lodge, Newton-le-Willows 78
Heigham Hall, Norwich 74
Hitch, Mrs., Mollington 75
Home for Epileptics, Maghull 79
Hon. Secretary, Outer Temple 80
Invernith Lodge Retreat, Colinsburgh 76
Kingsdown House, Box 80
Lady Superintendent, Streatham..... 80
Lawson, Nordrach-on-Dee, Banchory 77
London Fever Hospital, Islington 74
London Open Air Sanatorium, Wokingham 77
Malling-place, Kent 74
Manor Valley Sanatorium, Poolesshire 79
Melbourne House, Leicester 75
Middleton Hall, Co. Durham..... 74
Moat House, Tamworth 75
Newmains Retreat, Lanarkshire..... 78
Nordrach-upon-Mendip Sanatorium .. 78
Northumberland House, Finsbury-pk. 80
Northwoods House, Winterbourne.... 76
Norwood Sanatorium 78
No. 116, L.O., Strand..... 80
No. 346, L.O., Strand..... 80
No. 575, L.O., Strand..... 80
Peckham House, Peckham-road 76
Physician, Wimbledon..... 80
Plas-yn-Dinas, Merionethshire..... 76
Plympton House, South Devon 75
Ringwood & Inge, Haslemere 79
Sanatorium Clavadel..... 79
Silver Birches, Epsom 80
Springfield House Private Asylum, Bedford 75
St. Andrew's Hospital, Northampton 75
St. Luke's Hospital, E.C. 74
Stocker, Craven-street 80
Stretton House, Church Stretton 75
Tallerman Treatment Institute 80
Tower House, Leicester 75
Vale of Clwyd Sanatorium..... 73
Warneford Asylum, Oxford 74
Wonford House, Exeter 75
Wye House, Buxton 75

ASYLUMS—(Continued).
Yarrow Convalescent Home, Broadstairs..... 76

FINANCIAL, &c.:—
Birkbeck Bank..... 81
Equitable Reversionary Interest Soc. 81

HEALTH RESORTS, BATHS, &c.:—
Aberystwyth, the Biarritz of Wales .. 79
Cheltenham Spa 79
Leysin, Switzerland 79
Smedley's, Matlock 79
St. James's Electric, Light, and Pine Baths 79
The Hydro, Harrogate..... 79

HOMES WANTED:—
No. 349, L.O., Strand..... 80

HOTELS:—
Barton Court Hotel, New Milton 80

HOUSE & ESTATE AGENTS:—
Frank Newman & Blunt, Savile-row 88
H., Bournemouth 88
Langston & Co., Southwark-street.... 88
No. 364, L.O., Strand..... 89
Owner, East Dulwich 88
Owner, East Sheen 88
Stevenson, Manchester..... 88
Tubbs, Barbican 88
Vicar, Chapel St. Leonards 88
White, Farnham 88
Young & Co., Coleman-street 88
CONSULTING-ROOMS:—
45, Welbeck-street, W..... 89

LIFE & FIRE ASSURANCES:—
Prudential 80

MEDICAL ACCOUNTANTS, &c.:—
Turner..... 90

MEDICAL AGENTS:—
Aked & Aked 84
Fieldhall, Limited 88
Manchester Medical Agency 84
Manchester Medical Association..... 84
Medical Agency 83
Moore 88
Needes, Herbert 89
Needes, J. C. 87
Peacock & Hadley 84
Reynolds & Branson 87
Scholastic, Clerical, &c., Assoc. 88
Turner..... 88
Wilson & Son 84

MEDICAL SCHOOLS (LONDON):—
Cooke's School of Anatomy 71
West London Post-Graduate College.. 71

NURSING INSTITUTES:—
Army and Navy Male Nurses' Co-operation 73
General Nursing Association..... 73

NURSING INST.—(Continued).
Hospital for Sick Children, Great Ormond-street 72
Leeds Trained Nurses' Institution 72
London Nurses' Association 73
Male and Female Nurses' Assoc..... 73
Male Nurses' Association 74
Male Nurses' Co-operation 73
Mental Nurses' Co-operation, Edgware-road 72
Middlesex Trained Nurses' Inst. 72
National Hos. Male Nurses' Assoc. 72
Nurses' Co-operation, Portland-place 73
Queen Charlotte's Lying-in Hospital.. 72
St. John's House 72
St. Luke's Hospital, E.C. 73
Temperance Male and Female Nurses' Co-operation 73
Temperance Male Nurses' Co-operation 73
York-road General Lying-in Hospital, Lambeth 72

OFFICIAL NOTICES:—
Borough of St. Marylebone Health Society 71
Central London Throat and Ear Hos., Gray's Inn-road 71
Epsom College 71
Guy's Hospital 70
Hospital for Consumption and Diseases of the Chest, Brompton 70
Hospital for Nervous Diseases, Welbeck-street..... 70
Incorporated Institute of Hygiene 12, 13
King's College, London..... 71
London Post-Graduate Association 70
London School of Clinical Medicine .. 70
London Throat Hospital 70
Medical Department of Royal Navy 70
Mount Vernon Hospital, Hampstead 71
Pathological Laboratories, Portland-place 70
Royal Eye Hospital, Southwark..... 70
Royal Naval Medical Examination .. 70
Surgical Aid Society..... 70

PARTNERSHIPS & PRACTICES 89

RAILWAY & STEAMSHIP CO.'S:—
Elder, Dempster & Co.—
Mail Service to Jamaica..... 72
New Zealand Shipping Co..... 72
Orient Co.'s Pleasure Cruises 72
Royal Mail Steam Packet Co.—
Tours 72

SCHOOLS, &c.:—
Alleyn Court Preparatory School, Westcliff-on-Sea..... 71
Framlingham College, Suffolk..... 71

TUTORS & LECTURERS:—
Behnke 71
Fellowship 71
F.R.C.S. 72
Gemmell 71
Gooch 71, 72
Keria..... 71
Knight 71
No. 30½, L.O. .. 71
No. 353, L.O. .. 72
Schnelle 72
Weymouth 70

(For Index to Trade and Miscellaneous Advertisements see page 4.)

The Hunterian Lectures

ON

THE SURGERY OF THE SPINAL CORD AND ITS MEMBRANES.

Delivered before the Royal College of Surgeons of England

BY DONALD J. ARMOUR, M.B. TOR., F.R.C.S. ENG.,

HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY; SURGEON TO BELGRAVE HOSPITAL FOR CHILDREN; ASSISTANT SURGEON TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, AND TO THE WEST LONDON HOSPITAL.

LECTURE I.

Delivered on Feb. 24th, 1908.

MR. PRESIDENT, LADIES, AND GENTLEMEN,—My first duty is to thank the Council of this College for the honour that they have conferred upon me in appointing me Hunterian Professor of Surgery and Pathology. When I took for my subject "The Surgery of the Spinal Cord and its Membranes" I vainly imagined that it all could be included in the three lectures assigned to me. It is a striking proof of the advance that has been made in recent years in this branch of surgery that I find that all three lectures might well have been devoted to the discussion alone of spinal cord tumours. I propose, however, to discuss in my first lecture the congenital malformation known as "spina bifida." It will be of value, I venture to think, to review this subject in the light of the more radical operative treatment recently adopted for this deformity. In my second lecture I will take up the subject of fracture-dislocation of the spine in so far as it relates to injury of the spinal cord. Around the subject of regeneration in the spinal cord following its suture there has sprung up again a fierce conflict, and it will be useful to weigh the arguments advanced for and against its occurrence. Then, too, there does not seem to be by any means unanimity of opinion upon the question of operation in cases of injury to the spinal cord due to fracture-dislocation. The third lecture, in so far as time will permit, will be devoted to the subject of spinal cord tumours. It is here that the art and science of surgery stand upon no uncertain ground. Given an opportunity early enough, surgery can here promise, if not a cure in all cases, at all events a great amelioration of the distressing symptoms due to interference with the functions of the spinal cord. The fault at present lies, as I hope to show, in the tardy recognition of the nature of the malady in its earlier stages.

SPINA BIFIDA.

Under the terms "rhachischisis" and "spina bifida" are included the principal forms of congenital defects of the spine. Though etymologically the terms are descriptive of the defect in the vertebral column alone, nevertheless both, but more especially the latter, are used to describe as well the hernial protrusion of the cord and its membranes through the opening. But though the bony defect and hernial protrusion are commonly associated they are not always so. In other words, there may be, strictly speaking, rhachischisis or spina bifida without a hernia and a hernia without any spina bifida. The first is seen in localised rhachischisis proper and spina bifida occulta; the second in those cases of simple meningocele which make their exit between the laminæ of intact vertebræ. Both forms are characterised by a deficiency of the vertebral arches but distinguished by the presence or absence of a well-developed spinal cord. The following table from Ballantyne's work gives the classification of the different forms very clearly:—

I. Holo-rhachischisis or total spina bifida; the whole canal is widely open and there is no sac.
II. Hemi-rhachischisis, mero-rhachischisis, or partial spina bifida.
  A. Spina bifida occulta or crypto-mero-rhachischisis.
  B. Spina bifida without spinal hernia; the canal is widely open at one or more places, but there is no sac.
  C. Spina bifida with rhachicele.
    1. Meningocele.
    2. Meningo-myelocele or myelo-meningocele.
    3. Myelo-cystocele or syringo-myelocele.

Total rhachischisis includes all cases in which the vertebral canal is open from end to end. All the vertebral arches are imperfectly formed, fail to unite posteriorly, and are, moreover, directed outwards, so that the vertebral groove is widened. The cord is always rudimentary or atrophic, split open, or bifid. It may be entirely absent (amyelia) or merely represented by strands of nerve tissue, with traces of ganglia and nerve roots. Total rhachischisis occurs much more often with anencephaly than without it. In such cases the cranio-vertebral canal is open from end to end. Exceptionally, however, the cranial portion is open only in the occipital region. It is found only among the stillborn or those that live for a short time only, and in many instances the child is premature.

Partial rhachischisis includes those cases in which the defective development of the vertebræ is localised, affecting only a part of the column. It may or may not be associated with the presence of a hernia. In the absence of a hernial protrusion localised rhachischisis and spina bifida occulta are the terms applied to the condition. As will be seen, these differ very materially from each other. In the presence of a hernia the condition is spoken of under the terms of meningocele, meningo-myelocele, or syringo-myelocele, depending upon the relation of the spinal cord to the sac.

Localised rhachischisis proper resembles the complete form in two main essentials—viz., complete openness of the canal and the condition of its contents; but the bony defect is localised to one region of the column. It, too, is usually associated with anencephaly or mero-acrania. The defect may be cervical in position, the cord beginning in the dorsal region; or lumbar or lumbo-sacral, the latter being the most frequent. Ballantyne suggests that possibly in these cases a hernial protrusion may have existed and been ruptured during parturition. Subjects of localised rhachischisis are born prematurely or die soon after birth. According to Bland-Sutton this is the commonest form.

In spina bifida occulta there is no external evidence of the defective development of the vertebral column, normal skin covers the affected area of bone, and no cyst projects through the bony defect, which is usually closed in by a thick fibrous membrane. This membrane may be incomplete, the subcutaneous tissues entering the vertebral canal through the opening. In some cases an abnormal bunch of hair is present in the median line over the defect, or the skin covering it may be cicatrised. According to Muscatello, the latter always occurs when a heterogenous tumour exists within the vertebral canal. The presence of hair is not constant in spina bifida occulta. Dodd and Mayet report cases where hair was present without spina bifida. Nor does its absence exclude the presence of a spina bifida, as has been proved by many reported cases. The defect usually involves several vertebræ and is then easily palpable. On the other hand, it may be a small fissure in one lamina only and be quite undetectable. The spinal cord may be longer than normal or its central canal may be dilated opposite the defective laminæ. Von Recklinghausen says that in fœtal life a projecting sac, either a meningocele or myelo-cystocele, has been present, but that it shrivels away, the opening then being closed by cicatricial tissue. While the presence of a cicatrix and the absence of dura mater would seem to lend weight to this hypothesis, yet, as Ballantyne says, "great obscurity surrounds all the processes of intra-uterine repair, and especially with regard to the power of parts to form structures at a late date which ought to have been developed early." Muscatello was able to collect 32 cases of spina bifida occulta, of which nine were lumbar, eight lumbo-sacral, six sacral, and two dorsal.

In the remaining forms the congenital malformation resulting from a non-union of the laminæ of one or more vertebræ is associated with the protrusion of a sac, composed of the spinal cord, its nerve roots or its membranes, through the opening. Usually only three or four vertebræ are involved and this more commonly in the lumbar or sacral region. The sac usually protrudes posteriorly. Rarely, however, it bulges anteriorly, escaping through the defective body or transverse process, or laterally through the vertebral foramina. Such cases, in which the spina bifida is placed anteriorly, and the tumour forms an abdominal cyst, have been reported on by Willard, Emmett, and Robinson.

Under spina bifida with rhachicele are included three subvarieties named according to the position occupied by the fluid: myelo-cystocele or syringo-myelocele, where the fluid distends a portion of the central canal of the cord; myelo-meningocele, where it affects the subarachnoid spaces and the sac contains fluid, cord, and nerves; and simple meningocele, where the sac consists only of fluid and sac wall.

Etiology.—Time will not allow me to enter into a discussion of all the different explanations of the origin of spina bifida that have from time to time been advanced. As Ballantyne says, "It would simply be to tell over again the greater part of the story of teratogenetic theories of the past." The theories of maternal impressions, of traumatism, and pressure have been shown to be untenable. Some authorities adduce disease of the central nervous system as a cause. Rabaud, who has carried out detailed histological examination of cases, concludes that true spina bifida depends upon an active participation of the nervous system as the result of a meningitis. This gives rise to repeated muscular contractions which cause a separation of the lateral halves of the vertebral laminæ. In rhachischisis, however, the separation of the laminæ is due to muscular contraction, apart from a nervous factor. The meningitis causing a myelo-meningocele affects the fœtus between the third and fifth month of intra-uterine life. Myelo-cystocele arises from a process of which the initial stages are characterised by the formation of a widely extended medullary sheath. The association of hydrocephalus has been assumed to support this theory. Again, Morgagni advocated the theory of a dropsy of the cerebro-spinal nervous system. Both of these theories have since been largely abandoned for that of arrested development.

The Clinical Society's committee was of opinion that the theory which best explains the deformity is "that which assumes a primary defect of development of the mesoblast from which the structures closing in the vertebral furrow are developed." This defect may be that either the mesoblastic processes are formed in insufficient degree to meet and combine, or, meeting, are insufficiently developed to serve as a basis for the production of the various structures overlying the spinal cord. Others, including Taruffi and Recklinghausen, have added to the theory of arrested development that of disease of the parts. Cleland has suggested the factor of over-stimulation, combined with partial fission of the early embryo. Ballantyne thinks "that the chief factor is arrested ontogenesis and that the most of the structural peculiarities are its results, modified probably by the continued and unopposed growth and development of neighbouring parts, and possibly also by pathological processes." He would also add to the arrest of development a degree of excessive development in order to explain the bony and cartilaginous outgrowths from the vertebral bodies, the presence of teratomata complicating spina bifida, and the doubling of the spinal cord.

Association of other congenital defects.—This is very common. In addition to the anomalies in structure in immediate relation to the spina bifida the spinal cord may show other malformations in other parts. It may be divided into two parts, each with a central canal (diastematomyelia). The division takes place just above the sac of a meningocele, and the halves unite again just below the level of the sac. This may take place independently of the presence of an osseous or cartilaginous projection, presently to be described. Dilatation of the central canal (syringomyelia), usually just above the level of the spina bifida, has been noted. The pia mater and arachnoid are commonly thickened in connexion with the sac wall. Hydrocephalus is one of the commonest associated general conditions. It may be present without giving any evidence externally and its frequent development after operation is well known. Anencephalus in association with total and partial rhachischisis has already been referred to. Solovitzoff has described a dropsical distension of the fourth ventricle, leading to its enlargement in a downward direction. Absence and mal-development of the cerebellum have been described.

Outside the nervous system club-foot, double or single, is a common complication. Congenital dislocation of the hip, hare lip, cleft palate, imperforate anus, duodenum and pharynx, ectopia vesicæ, lack of development of the genitalia, exomphalos, have all been described. Rare anomalies are congenital prolapsus uteri in lumbo-sacral spina bifida (Ballantyne), sympodia, defect of chest wall, and hernia of lung.

Attention must also be directed to other defects in the vertebræ, in addition to the non-closure of the arches, in spina bifida. Ogle showed a case before the Pathological Society in 1860 in which a spina bifida was complicated by curvature of the spine. The curvature was due to the incomplete development of the anterior part of the body of the second lumbar vertebra, which was pushed back as it were by the approximation of the bodies of the first and third vertebræ. The commonest form of these defects is the absence of half a vertebra. The persistent half may be ankylosed with the vertebræ above and below. Or the half vertebræ may be in excess of the normal number. An alternating series of half vertebræ may occupy a considerable extent of the vertebral column. The result of such defective development of one or more vertebral bodies at the seat of defect is to give rise to twisting or curvature of the column. These curvatures may be lateral or in an antero-posterior direction.

In association with spina bifida there have been described horizontal processes of bone projecting into the spinal canal and transfixing the cord. Such a specimen from the College Museum, in which the cord is perforated by an osseo-cartilaginous element, is here on the table. In other cases the spinal cord is bifid, the halves of the cord diverging as they enter the sac, the bony process lying between them. Cases in which a portion of the vertebral column is completely cleft are reported. A good example of this condition is here on the table. Kirmisson has called attention to the occurrence of abnormalities in the pelvic bones in lumbo-sacral spina bifida, more particularly in the form known as spina bifida occulta. They are usually associated with scoliosis of the lumbo-sacral spine. In one of his cases the left half of the pelvic cavity was narrow and flattened, the wing of the ilium elevated and almost in contact with the vertebral column. The left os pubis was elevated and the symphysis directed obliquely towards the left. The elevation of the os pubis gave rise to a shortening of the left lower limb and a consequent limp. Such pelvic deformities have an obvious importance in regard to parturition.

Frequency.—Wernitz says that spina bifida occurs once in 1000 births. Duval found 57 cases in 36,148 children and Chaussier 22 cases among 22,293 children. About 300 children die every year in England from spina bifida, but as stillborn births are not registered it is obviously impossible actually to gauge its frequency. Next to club-foot it is the most frequent of the congenital malformations.

Sex.—Of Moore's collection of 378 cases the sex of the patient is mentioned 200 times, and of these 99 were males and 102 females. Of the 245 cases collected by the Clinical Society's committee the sex was stated in 156, and of these 74 were males and 82 were females. Of Demme's 57 personally observed cases 26 were males and 31 were females. Of the 1768 cases dying in the first year of life, as supplied by the Registrar-General's report for the three years 1881–83, 779 were males and 989 females. From these figures it would appear that spina bifida is rather more frequent in females than in males.

Site of defect.—In the 125 specimens examined by the Clinical Society's committee the various regions of the spine affected were as follows:—The whole spine, 1 case, i.e. 0·8 per cent.; the dorsal region, 9 cases, i.e. 7·2 per cent.; the lumbar region, 9 cases, i.e. 7·2 per cent.; the dorsi-lumbar region, 3 cases, i.e. 2·4 per cent.; the lumbo-sacral region, 68 cases, i.e. 54·4 per cent.; the sacral region, 21 cases, i.e. 16·8 per cent.; the dorsi-lumbo-sacral region, 7 cases, i.e. 5·6 per cent.; the sacro-coccygeal region, 1 case, i.e. 0·8 per cent.; not determinable, 6 cases. Analysis of Moore's 378 cases shows that 34 per cent. were lumbar, 29 per cent. lumbo-sacral, 23 per cent. sacral, 6·5 per cent. cervical, and 4·5 per cent. dorsal. While therefore spina bifida may appear in any region of the spine, the lumbar or lumbo-sacral region is most frequently affected, the sacral being the next in order of frequency. According to Ruysch, in about 77 per cent. of all cases the defect is in either the lumbar or sacral regions, or in both. Probably many of the so-called cervical spinæ bifidæ have been really occipital meningoceles. In all probability the frequency of spina bifida in the lumbo-sacral region is due to the fact that the medullary groove is latest in closing here to form the neural canal.

Myelo-cystocele or syringo-myelocele.—In this form the cavity of the sac is a dilatation of the central canal of the cord, the wall of the sac being composed of the thin spinal membranes, without any trace of dura mater, together with a thinned-out layer of nerve elements representing the atrophied cord, usually in the form of cylindrical epithelium. The nerve roots run around the outer surface of the sac and are connected with it on their way to the intervertebral foramina. The sac is covered by skin, subcutaneous tissue, and aponeuroses. Myelo-cystoceles are fortunately of rare occurrence and are observed in the lumbar or cervical spine,

but very rarely elsewhere. Usually the lumbar enlargement is the part affected. In the report of the spina bifida committee of the Clinical Society of London only two authentic cases of pure syringo-myelocele were found. Myelo-cystocele and meningocele may be combined. The meningocele may be situated on the ventral or dorsal surface of the myelocystocele, or in both places at the same time. The conditions may be complicated on account of the rupture of the myelocyst. In the ventral variety of myelo-cysto-meningocele and in the dorso-ventral variety the ventral accumulation of fluid may lift the cord or the myelocyst out of the vertebral canal and displace it backward into the sac.

Myelo-meningoceles or meningo-myeloceles are the most common form, 63 per cent. of all cases being of this variety. They contain within the sac both nerve roots and cord, unless the deformity be so low down that only the cauda equina is involved. The sac is formed of dura mater, which is continued uninterruptedly from the theca surrounding the spinal cord in the normal part of the canal. The dura mater is lined by arachnoid, so that the cavity is the subarachnoid space distended by fluid. The sac may be multilocular. The subdivision of the sac is brought about by partitions of varied arrangement and extent. Parts of the sac may be completely closed off from the rest, but as a rule small circular openings exist in the septa. The cord and the nerves passing forwards from the posterior wall of the sac may be included in a median septum. Or the septum may consist of two main lateral parts, that of each side corresponding in position to the series of nerve roots. The larger subdivisions may again be divided up by cross partitions into secondary spaces.

Myelo-meningoceles may be divided into those cases in which the cord is attached to the sac and those in which it runs through the cavity without becoming attached. But in the latter cases the nerve roots may be attached to the sac wall. The commoner arrangement is the first named. Here the spinal cord crosses the upper part of the sac to its posterior wall, with which it becomes inseparably blended at a point a little above its middle. The level, however, at which the cord crosses the sac is variable. Occasionally it becomes connected with the roof of the sac immediately it emerges from the vertebral canal, without the intervention of any space. Or again, the portion of the sac above the cord may form the larger part of the tumour. In many cases the cord is attached to the upper portion of the sac by a falciform fold of membrane, forming a median septum imperfect anteriorly. The cord lying in the sac varies from its normal size to a very attenuated structure. Beyond the point where it becomes incorporated with the sac wall it cannot be traced by dissection. The nerves arising from the cord as it crosses the sac pass forwards upon it towards the intervertebral foramina. The others arise from the posterior wall of the sac in a vertical series and cross the space horizontally to their respective foramina. Both nerve roots are present and usually quite distinct. At their origin they are partially separated by a falciform fold of pia mater, representing a continuation of the ligamentum denticulatum. After perforating the dura mater, the nerves present the normal anatomical arrangement, the posterior root ganglia and the posterior primary divisions having the usual disposition. In some cases, however, the root ganglia are found within the vertebral canal. At the point at which the spinal cord meets and becomes incorporated with the sac wall the tumour may show on its external surface a slight median longitudinal furrow or a more localised depression, the so-called "umbilicus." These depressions are by no means constant and depend upon the state of distension of the sac. While the presence of a depression indicates that the tumour is a myelo-meningocele, its absence does not prove the contrary. In place of an "umbilicus" there may be, though rarely, a more definite and deeper depression. Such a specimen investigated by the Clinical Society's committee showed that the depression corresponded precisely to the point at which the cord met the sac and that the depression led into the centre of the cord. It was therefore inferred that the depression represented the opening of the central canal of the cord upon the surface of the tumour. Myelo-meningoceles are common in the lower segment of the cord, uncommon in the dorsal, and rare in the cervical spine. The outer covering of a myelo-meningocele is often membranous, except for a small portion round the base, and the shape is more or less irregular owing to the partitions that divide the cavity.

Simple meningoceles are usually loosely described as consisting of a protrusion of the spinal membranes only, the cavity of the sac being said to be the subarachnoid space. According to Thoma, however, the sac is lined with dura mater only throughout and the fluid lies in the subdural space. This statement is borne out by the investigations of the Clinical Society's committee. The committee was unable to find a specimen illustrating what is assumed to be the typical form of spinal meningocele—i.e., a sac composed of dura mater and arachnoid communicating with the general cavities of the spinal membranes. On the other hand, Recklinghausen and Muscatello both believe that the sac consists of the thickened arachnoid alone. Its inner aspect has the appearance of a serous membrane. The cord and nerves opposite the opening may be slightly prolapsed or displaced back so as to lie in the neck of the sac, more or less occluding it. Or they may even lie free in the sac near its orifice. The pedicle is often very slender and may escape through an intervertebral space, i.e., between the arches of two intact vertebræ. This has been termed interstitial spina bifida. Or if a cleft is present it is usually limited to a small area. Von Bergmann says it is frequently situated at one side of the median line. The small communication between the spinal canal and the external sac may become obliterated and the sac persist independently, giving rise to the so-called "false spina bifida." On the other hand, the vertebral arches may be deficient over a considerable area, the neck of the sac, however, remaining small. In some rare cases the sac is double within, communicating with the interior of the spinal canal by two distinct openings, though covered externally by a single cutaneous covering.

Meningoceles are usually covered by skin, but occasionally a small area at the summit is membranous. While occurring in any region meningoceles are generally situated in the lumbo-sacral or sacral region, are decidedly uncommon in the cervical and lumbar regions, and very rare in the dorsal. They are much less fatal than the more ordinary form of spina bifida, either remaining *in statu quo* or undergoing spontaneous cure. Hence it is difficult to ascertain with any degree of accuracy their frequency. While usually described as not at all common, and forming only 8 per cent. of all forms, Muscatello regards meningoceles as the commonest form.

Diagnosis.—The seat of the defect, and the fact that it is usually congenital, render it easy as a rule to make the diagnosis except in cases of spina bifida occulta. In cases in which the tumour makes its exit through a defect at the sides of the spinal column and forms an intra-abdominal cyst it may be impossible correctly to distinguish it from other abdominal cystic tumours. The coexistence of paralysis, deformities, or hydrocephalus with an abdominal cystic tumour having its attachments in the neighbourhood of the spinal column should lead to the recognition of the possibility of its being a spina bifida.

It may be difficult or impossible to tell which variety of spina bifida is present in any particular case. The complete cleft, with the zona epithelio-serosa and the area medullo-vasculosa, offers no difficulty. Between the other forms, myelo-cystocele, meningo-myelocele, and meningocele, it is often not possible to discriminate clinically. There are, however, certain distinguishing marks which should enable one to make a differential diagnosis in some cases. Myelo-cystoceles are usually of the size of a billiard ball or smaller, covered with skin, but sometimes partly with membrane, situated in the lumbar or cervical region, with a small cleft, which may be a little to one side of the median line, and involving one or two vertebræ. They are usually associated with abnormal spinal curvatures, either extensive lateral curvature or marked kyphosis or lordosis, due to segmental defects or asymmetry of the vertebræ. Myelo-meningoceles are usually covered for the most part by membrane, are often of irregular shape like a tomato, and translucent. They are found in the lumbar spine or below it, are uncommon in the dorsal and very rare in the cervical spine. The cleft is large and wide open. Scoliosis and abnormal antero-posterior curvature are uncommon. Finally, simple meningoceles are more nearly globular, of uniform shape, and extremely translucent. They are usually covered with skin, but may have some membrane at the top and frequently have a small base. The vertebral cleft is small and narrow, less than three vertebræ are involved, and they occur in the sacral or lumbo-sacral region, seldom in the lumbar or cervical, and rarely in the dorsal.

It is often said that the presence of the cord or nerves may be inferred from the shadows on looking through the sac with a hydroscope, exactly as one would do in examining a hydrocele, using a strong light for transillumination, or that their presence can be ascertained by applying a mild faradic current by means of a small electrode applied to different points in the walls of the sac. It is only necessary to speak of these methods in order to call attention to their unreliability as a means of differential diagnosis. The committee of the Clinical Society decided that they were not acquainted with any means by which it was possible to determine in the living subject the presence of the spinal cord in the sac of a spina bifida. So that while the differential diagnosis between the several varieties is of great importance from the point of view of prognosis and treatment, it is scarcely ever possible to diagnose the variety until the sac is opened.

The diagnosis may be extremely difficult with spina bifida occulta. The overgrowth of hair not infrequently is the only outward sign of deformity. This hypertrichosis is usually so arranged that it forms a crown over the centre of the defect. When well developed it may resemble a tail. Cicatricial changes of the overlying skin are not common and have already been referred to as being always present with heterogeneous growths in the vertebral canal. The defect in the bone may usually be felt, although not always, especially in cases in which the tumour protrudes and covers it up. In such cases the x rays will be of use in demonstrating the bony defect.

Abnormal curvatures of the spine (scoliosis, kyphosis, lordosis); deformities, especially talipes equino-varus and congenital dislocation of the hip; signs of pressure upon the spinal cord or evidences of degeneration, especially in its posterior portion, are conditions frequently found with spina bifida occulta. Sensory and trophic disturbances, often leading up to such neuropathic ulcerations as perforating ulcer of the foot, may be a result of the abnormal condition of the cord and be of differential diagnostic importance. Such sensory and trophic symptoms may only develop during the period of greatest growth in the body—i.e., from the ninth to the seventeenth year. The explanation given for this fact is the presence of a fibro-muscular band perforating the membrane covering in the bony defect and connecting the skin over the defect with the lower end of the spinal cord. It represents an imperfect separation between the two in fœtal life. Its lack of growth gives rise ultimately to traction on the spinal cord and pressure on it by the lower margin of the bony opening. Cases of this kind have been successfully operated upon by Katzenstein, Jones, Milner, and others.

Treatment.—The treatment of rhachischisis, or complete lack of union, is hopeless. Spontaneous cure in spina bifida does take place occasionally (13 cases were reported by the committee of the Clinical Society), and in all cases in which this is suspected from a gradual shrinkage of the sac the patient should be treated on conservative lines by appliances affording protection from violence. Spontaneous cure may also take place from rupture and ulceration, but these processes are also the most common causes of death, and the risk of septic meningitis is too great to justify waiting for nature to accomplish healing. Protection against rupture and abrasions should be maintained in all cases till the time for surgical intervention arrives. Simple tapping should never be resorted to as a curative procedure. The method does not rest upon any scientific basis and is too fatal to warrant its use. It is followed by a rapid re-accumulation of the fluid and in some cases sudden death has followed its use. In any case repeated tappings are apt to result in leakage, which sooner or later leads to death from meningitis or exhaustion. Aspiration is therefore only of value as a palliative measure when the tumour is tense and ulcerated. By withdrawing the fluid rupture may be avoided and time given for the ulcer to heal before proceeding to excision. Leakage may generally be prevented by using a hollow needle, as fine as possible. It should be passed obliquely through the muscles at the base of the sac. A collodion dressing should be applied and the child kept in a recumbent position. Strangulation of the sac, introduced by Bell in 1791, needs only to be mentioned to be condemned. An elastic band is placed around the base of the sac and prevented from slipping by a clamp or by two needles passed through the sac at right angles to each other. Pressure to prevent any increase in the size of the swelling must be used with the very greatest caution. It is only applicable to those cases in which the tumour is of very small size and covered with normal well-nourished skin. The great liability to ulceration of the coverings of the sac renders this form of treatment of very limited application.

The only forms of treatment of spina bifida to be recommended are palliation or excision. Palliative treatment is indicated in all cases unsuitable for operation, either from the variety of the tumour or the condition of the sac. It may also be used as a temporary measure in cases unsuitable for immediate operation on account of the age or general condition of the patient, or where the coverings of the sac are septic and time is desired to get them clean. It consists of protection of the tumour from injury and the prevention or lessening of septic infection. This is obtained by some form of shield, made of perforated celluloid or aluminium, accurately fitted over the tumour and fixed by strapping round its margin to prevent it shifting its position. A broad abdominal belt should also be applied. Great care must be taken to prevent soiling of the tumour by fæces, especially when situated low down. If ulceration is present treatment by antiseptic dressings should be persevered with to try to get healing.

Treatment by injection into the sac of an iodo-glycerine solution, usually known as Morton's fluid from the name of its introducer, is the only other treatment besides excision which will be referred to. Morton reported 80 per cent. of cures by his method. The committee of the Clinical Society reported upon 71 cases treated by this method. Of these 35 (49 per cent.) were cured, 4 improved (5·4 per cent.), 5 not improved (7 per cent.), and 27 deaths (38 per cent.). The great objection to the use of this method is the impossibility, already referred to, of telling what variety of spina bifida is present in any particular case; or, in other words, whether the sac does or does not contain the cord and nerve roots. That myelo-cystoceles are more common than heretofore stated, and are frequently mistaken for simple meningoceles, has been shown by Hildebrand and Muscatello.

Simple meningoceles, which are best suited for the injection method, are also those in which the more radical treatment of excision is clearly indicated. So that treatment by excision may be said to be now almost universally adopted, except in those cases where excision is out of the question on account of ulceration and threatening rupture. Then the injection method may be tried, though time may be gained by aspiration through the healthy skin at the base of the sac in cases of threatened perforation. The ideal operation of excision is one that will leave the cord unharmed and secure a tight and subcutaneous union of the dura mater which will not leak cerebro-spinal fluid. It is scarcely necessary to emphasise the primary importance of asepsis. If the skin be ulcerated, it should be sterilised by pure carbolic acid followed by alcohol. The ulcerated area should be excised when fashioning the flaps. The patient should lie prone or upon one side with the hips elevated, and chloroform anæsthesia used. Every precaution should be taken to lessen shock during the operation. The skin incision should be made in such a way as to furnish two flaps of sufficient size to close the wound without tension. It is an essential for success that the wound should heal by first intention. An elliptical incision in the long axis of the spine is the best because it allows of the flaps being undercut in a lateral direction. It is important to have the sac full while separating the skin flaps. The sac, after free exposure down to the pedicle, should be opened into by a longitudinal incision along one side to avoid injuring the cord and nerve roots, which are more likely to run on the dorsal surface. The interior of the sac is then examined. Meningoceles are the simplest to deal with. If no nerve roots are present the sac is cut off, ligated, or sewn up, according to the size of its neck. Should any nerve roots be exposed they are to be replaced in the vertebral groove. If adherent to the inner surface of the sac they must be carefully dissected off. Or if this is not possible, the portion of sac wall to which they are adherent must be returned with them. Schmidt in such cases involutes the sac and makes it serve as a tampon to close the opening. In many reported cases the nerves could not be returned and were removed without harm. According to Polaillon and Monod, the nerves which are spread out over the wall of a lumbar or sacral spina bifida and do not return to the spinal canal have no part in the innervation of the lower extremities. It is difficult to understand how they can

perform any function when they end in the sac. Probably much time has heretofore been wasted in trying to preserve such functionless nerves.

Some authors question the justifiability of operation upon myelo-cystoceles. It may be possible, however, to dissect the skin flaps back from the meninges and after emptying the sac to cover the defect. This applies particularly to cases in which the bulging is slight. Should this be impossible, as it usually is in large myelo-cystoceles, the dorsal part of the sac may be excised. The thinned out dorsal part of the cord, which forms a part of the sac wall, would appear to be functionless. At any rate its removal does not increase the paralysis. When a myelo-cystocele is complicated by a meningocele the operative indications differ according to the variety. In the anterior variety the anterior part of the cord is disintegrated and the posterior part damaged. Operation is therefore useless. The same applies to the antero-posterior variety. The posterior variety on the contrary is, according to Henle, the most favourable condition for operation, if we except simple meningoceles. After removal of the meningocele the myelocyst, if small, may be left alone; if large, it should be treated as previously described.

The question of operation in cases of myelo-meningocele depends largely upon the extent of adhesion of the cord and nerve roots to the interior of the sac. In those rare cases in which the cord and nerve roots run free in the sac the conditions for operation are more favourable than in those cases where the cord is adherent to the sac. After opening the sac at the side the cord, together with the portion of attached sac, is replaced in the spinal canal. It is impossible to dissect the cord off the sac wall. It is well in closing the sac to arrange that the suture line in the meninges does not correspond with that of the skin, as recommended by Mayo Robson. Henle prefers to suture the meninges longitudinally and the skin transversely. Stiles uses a deep row of mattress sutures in the skin flaps in order to evert them and thus obtain firmer union by bringing their deep surfaces into contact over a larger area. If there is tension he threads the loops on either side through a piece of rubber tubing.

Certain operators have endeavoured to cover the bony defect with more resistant tissue, so as to prevent the occurrence of a hernia. With the object of obtaining a firmer closure of the deficiency in the spine Bayer dissects up from the erector spinæ muscles two flaps which are folded over towards the middle line and sutured, so that the aponeurotic surfaces of the flaps are directed towards the spine. Döllinger fractured the rudimentary arches and sutured the free ends together. Selinko made a pedunculated flap of bone and periosteum. Bobroff made a pedunculated flap of the crest of the ilium. Zeneko recommends the filling of the bony gap by taking bone from the remains of the sacral arches, and the tuberosities of the posterior surface of the sacrum. Mikulicz and others have stated that the muscles and fascia are sufficient. When the deformity is situated high up the ribs or shoulder blades have been made use of. Robson and others have transplanted animal bone and periosteum into the deformity. Roswell Park uses ivory, celluloid, and silver foil in order to cover in the defect, and in only one case has he had to take the material out. He advises the injection of a small dose of cocaine solution into the dural cavity in order to quiet down reflex activity and avoid any unpleasant effects from that source. These methods, which materially complicate the operation and add to its danger, should be limited to those cases with wide defects, especially as the results of closing the deformity with meninges and skin are very good. Bayer's method is the simplest and is sufficient for all cases, and therefore to be recommended. Very few relapses are reported following any of the various methods. Some surgeons condemn these additional measures *in toto*. Stiles, for instance, says: "All the other methods—namely, the chiseling through and wrenching inwards of what remains of the laminæ; the separation of periosteum from the ilium; the grafting of bone, either from a human subject or from the rabbit—would appear to be quite unnecessary and to add to the gravity of an already severe operation."

The only indications to be met in an operation for spina bifida are the removal of the sac and the closure of the cleft, and the simplest and quickest technique is the best. These patients cannot stand a prolonged operation. No drainage should be used. The patient should be kept in a horizontal position, with the head lowered, if possible. It is not necessary to keep them off their backs. Asepsis must receive special attention in the after-treatment of the wound, and every care taken in nursing to prevent soiling of the wound by urine or fæces. The inner dressing may be covered with collodion or by rubber tissue fastened around the edge by adhesive plaster. The outer dressings should be frequently changed.

Age for operation.—As already stated, the age at which operation takes place has a decided bearing upon mortality. Most surgeons advise waiting if possible for two or three months or longer to allow for improvement in the general or local condition. Sachtleben, on the contrary, advises operation as early as possible. Broca and Moore advise waiting several years. Considering the large mortality during the first year, if we are to save life, the operation must be done as early as possible. Otherwise surgery will lose the opportunity of curing or improving a number of cases. Late operation will have little or no effect in improving the paralysis. It will only remove the tumour.

Contra-indications to operation.—The chief contra-indications to operation are marasmus and hydrocephalus. The excision of spina bifida will not cure the associated hydrocephalus. If congenital hydrocephalus is incurable, then the association of that condition with spina bifida constitutes a definite contra-indication to operation. Moreover, hydrocephalus frequently supervenes upon a successful operation for spina bifida. To explain this Stiles suggests that the ventricles are already dilated at the time of operation. Muscatello would explain it by spread of an inflammation, a diffuse serous meningitis, originating in the ulceration of the sac, since it appears especially in these cases. Fowler raises the question as to whether there are not certain underlying conditions in the etiology of hydrocephalus and spina bifida that are unfavourable to cure. He thinks one of the most discouraging aspects of the whole question is whether, after successful closure of the defect in the bony canal, there will not subsequently develop conditions which, without the original presence of this defect, would have either destroyed the child or left it a ready victim to the effects of hydrocephalus. There is nothing known that will prevent the progress of hydrocephalus.

Ulcerative processes in the region are temporary contra-indications for operation, for asepsis may be impossible. In a case of this sort one should first endeavour to heal the ulcers by the application of suitable dressings and operate subsequently. Small ulcerations may not be a contra-indication when it is necessary for some reason or other to operate immediately, though the chances of infection are much greater than when the skin is intact. Where ulceration has led to rupture of the sac it is practically impossible to obtain a successful result by operation. The amount of paralysis present is one of the chief indications for or against operation. Bayer now regards paralysis as a contra-indication. It may be said at once that complete paraplegia with involvement of the sphincters will not be cured by operation and s oconstitutes a contra-indication. If the paralysis is due to tension of the nerve elements and not to lack of development one may expect improvement by operation. Therefore cases of partial paralysis may be operated upon. In many cases, however, all that can be expected from operation is the removal of an unsightly tumour and the prevention of death by meningitis from rupture or ulceration of the sac.

Prognosis.—This must be considered from three points of view: (1) Non-operative; (2) operative; and (3) remote results. The prognosis without operation, except in small tumours covered with healthy skin, is absolutely bad. Most of them die within three months of birth from rupture of the sac and consequent septic meningitis, or from marasmus. During the three years 1881-83 there were in England and Wales 1768 deaths under one year of age from spina bifida, and of these 1375 died within the first three months. The prognosis in complete clefts and all myelocoles is hopeless. It is most favourable in simple meningoceles, because they are frequently isolated and not so often complicated with other deformities or paralysis. The next most favourable prognosis is in myelo-cystoceles. Thin septic coverings of the sac and associated hydrocephalus add to the unfavourableness of the prognosis. It is impossible to arrive at the true operative mortality in spina bifida because, although a large number of operations by excision have been reported, the unsuccessful cases are seldom published. Nor has sufficient time yet elapsed since the employment became general of the radical operation, introduced by Mayo Robson in 1892, to gauge its remote results.

The operative prognosis varies with the character of the tumour and the age of the patient. In all cases of myelocele, in most cases of myelo-meningocele with paralytic complications, in the presence of sepsis, or associated hydrocephalus, it is extremely bad, even well-nigh hopeless. The age at which the operation is undertaken shows the most decided bearing upon the mortality. In those operated on within the first few months of life the mortality is over 35 per cent., whilst in those operated upon when five or more years old the mortality is 4·7 per cent. This difference can be largely accounted for by the fact that the patients living five years or more are not bad cases, and are presumably good subjects for operation.

In 1893 Hildebrand collected 87 excisions, with 64 recoveries, i.e. 73·5 per cent., and 23 deaths, i.e. 26·5 per cent. He also reported 13 cases operated upon in Koenig's clinic, and concludes that most myeloceles and meningomyeloceles and cases in which there is severe paralysis should not be operated on. In 1895 Hanson reported 150 cases from literature treated by excision during the aseptic period, with a mortality of 27 per cent. Mayo Robson, in the same year, reported 20 operations, with a mortality of 30 per cent. He advises operation in all cases, except where the tumour is so small that operation is evidently not needed, and where there is a large fissure, marked hydrocephalus, or paralysis. In 1892 Bayer reported 14 cases and in 1897 three additional cases. He concludes that 59 per cent. of patients operated upon for spina bifida will die sooner or later and decides to operate in future only under the following conditions: (1) when there is no definite hydrocephalus; (2) when there is no paralysis; and (3) when clinically no complications are to be expected in the sac. In 1903 Sachtleben reported 30 cases of spina bifida occurring in Mikulicz's clinic, 18 of which were operated upon. Of these 18 six died and 12 were locally cured, but only five were completely cured. Of the 12 cured locally six died between three and a half months and one year after operation. These were cases complicated with paralysis or hydrocephalus. The five completely cured were simple meningoceles. The final results were satisfactory in only 38·9 per cent. of the patients. In 1905 Stiles recorded 12 excisions with eight recoveries, apparently cured—i.e., 66·6 per cent. In 1905 Moore collected all the reported cases, 378 in number, treated by operation from every people on the globe. The series begins with a case reported by an American surgeon, Sherwood, in 1813, and ends with cases reported in 1905. He refers to 67 articles with reports of cases treated by injections of iodine, but adds that "this treatment has been practically abandoned as dangerous and unsurgical." There are 190 articles, in which 370 cases treated by excision are reported. In his cases the average mortality was 27 per cent. In those operated upon before 1885 the mortality was 30 per cent., and in those operated on during and after 1885 the mortality was 24 per cent. There was a reported mortality of 7 per cent. within three months after operation, which would make the real average mortality about 35 per cent. He thinks that if all cases had been kept under observation and reported the probability is that the mortality at the time of, and subsequently to, operation would be fully 50 per cent. In 23 per cent. of his cases there were complications, quite evenly divided between paralysis, club foot, and hydrocephalus, and in many cases all these conditions were present. The causes of death following operation most frequently mentioned are shock, convulsions, meningitis, hydrocephalus, and late infections. Accidents during operation were very few, hæmorrhage not being mentioned. Moore arrives at the following conclusions from the analysis of his cases: (1) Operation upon children of very tender age is scarcely worth while, because it is accompanied by so large a rate of mortality and because it does not stop the progress of progressive cases; (2) patients five or more years old can be operated upon safely; and (3) patients with large or rapidly growing tumours, with hydrocephalus, and with paralysis or deformities of the extremities, are not cured.

The most recent, and at the same time the most instructive, statistics are those of Boettcher quoted by Lecène. They have the very great advantage of being taken from cases which were under the observation and care of one man. Boettcher has collected all the cases of spina bifida seen and operated upon at the clinic of Breslau from 1891 to 1906, and has added to these several of Professor Garré's personal observations. They number in all 64. He divides them into four varieties, which are surgically not comparable to one another, because the prognosis is essentially different. These varieties are: (1) meningocele and myelo-meningocele; (2) myelo-cystocele and myelo-cysto-meningocele; (3) myelocele; and (4) spina bifida occulta. The gross results were as follows: Of the 64 cases seen 39 only were operated upon—i.e., 61 per cent. Of the 39 operation cases 13 died immediately from the operation. This is a very considerable number, but it should be pointed out that at the Breslau Clinic the operative indications are very far-reaching and there is no hesitation in operating upon spinæ bifidæ with ulcerated and infected sacs. The cause of post-operative death was in six cases acute meningitis, and in four post-operative hydrocephalus. No necropsy was performed in the three other cases, but it is reasonable to assume that death was due to meningeal infection. Of the 26 cases that survived the operation 12 died soon after, 10 from intercurrent maladies and two from lesions probably associated with the spina bifida. There remain 14 patients who have been definitely cured of their spina bifida. With one exception all these cases were meningoceles. Turning to the operative prognosis in each form:—

1. *Meningocele and meningo-myelocele.*—These include 25 cases operated on. The prognosis differs very much according as to whether the sac is completely independent of the spinal cord and the nerves of the cauda equina (simple meningocele) or whether they are more or less adherent to the sac (meningo-myelocele). When the spinal cord is entirely independent of the sac one can say that the results are really good, and that in the main this is the only form of spina bifida which is operable with a fair prospect of success. Of 13 cases operated on of meningocele, without adhesions to the spinal cord, there were only two operative deaths: one on the seventh day, probably from infection, the other, in which there was an ulcerated sac, from meningitis. Of the 11 patients who survived the operation four were cured by the operation. Unfortunately two of them, who exhibited previously to the operation vesical and rectal incontinence, died from hydrocephalus three and a half and five months after the operation. Of the remaining patients three succumbed some time after the operation, one year, four years, and one year, owing to intercurrent affections. Six were definitely cured, and when seen nine years, ten years, nine years, ten years, two and a half years, and one year after the operation were in very good condition. One only showed slight incontinence of urine and fæces, whilst another had a certain amount of weakness of the right lower limb. If, on the other hand, the spinal cord or the roots of the cauda equina are adherent to the sac, myelo-meningocele, the operative prognosis becomes quite another matter. Of 12 cases of this variety which were operated upon in one only was there a really satisfactory result. When seen ten years after the patient could be regarded as cured, although there was still some slight difficulty in micturition. In all the other cases the results were bad. Six succumbed immediately after the operation (meningitis, hydrocephalus, cachexia, diarrhœa), or only survived for a short time (ten months and a year), exhibiting severe paraplegia with incontinence of urine and fæces. The contrast between these two series of results is striking and shows that the post-operative results are disastrous, no matter how little the spinal nerve centres are involved in the spina bifida.

2. *Myelo-cystocele and myelo cysto-meningocele.*—These two forms of spina bifida are anatomically very similar and the post-operative results are closely comparable. Here we have to deal with the grave forms of spina bifida. The nerve centres are always more or less severely malformed, and paralytic troubles, if they do not exist previously to the operation, make their appearance very shortly after it. Of 11 cases operated upon one only recovered completely. This fact is the more remarkable as the patient had slight hydrocephalus before the operation. In the other ten cases the results were very disastrous. Two died immediately from post-operative meningitis. In other cases in which paralysis was present before operation it was aggravated, and in those in which there had been no paralysis previously paraplegia and incontinence appeared after the operation. All died sooner or later from progressive cachexia or infection.

3. *Myelocele.*—In this form of spina bifida, with the spinal cord open (myelo-rhachischisis of Lapointe), as might be anticipated, the results of surgical intervention are disappointing. The malformation is too grave (spinal cord cleft and flattened) to allow of a hopeful prognosis, and the only thing which can be done is to prevent meningeal infection, which would bring about a fatal result without

surgical intervention. The results obtained at the clinic of Breslau have been *nil*. Of eight patients with myelocoeles six were inoperable owing to paraplegia or ulceration of the medullo-vascular area. In the two which were operated upon the result in one case was immediate death from meningitis. In the other a post-operative paraplegia gradually increased and death occurred at the end of ten months.

4. *Spina bifida occulta.*—In the clinic of Breslau one case belonging to this variety was operated upon with success. There were no paralytic troubles before or after the operation. It is necessary to point out that spina bifida occulta does not require operation when it is not accompanied by any nervous trouble. When paraplegic and trophic troubles are present (especially perforating ulcers), the indications for intervention can be laid down, but the knowledge at our disposal does not enable us to say much about the results.

The impression gathered from the conscientious reports of Boettcher is that all forms of spina bifida (except spina bifida occulta, and especially pure meningocele—i.e., without cord or root adhesions) are of exceedingly grave post-operative prognosis. With one happy result (myelo-cysto-meningocele, cited above) there were post-operative deaths, persistent aggravations, or the appearance of paraplegia and incontinence with an ultimately fatal termination.

Tumours complicating spina bifida.—Many cases of spina bifida have been reported complicated by tumours of congenital origin, cysts, lymphangiomata, angiomata, myomata, lipomata, fibromata, and mixed tumours containing fibrous tissue, fat, muscle, cartilage, and bone; whilst steatomata, dermoid cysts, and true teratomata have all been described. For the most part these growths arise in the sacral region, where the same influences are at work which predispose to the growth of congenital sacro-coccygeal cysts and tumours. They are frequently attached to the meninges or lie partly within the spinal canal and press on the cord and roots. By far the commonest of the tumours is the multilocular cyst, which represents the dilatation of numerous lymph spaces in the pia-arachnoid, giving rise to a number of cyst cavities. Virchow asserts that many of the so-called caudal appendages of man are sacral spina bifida complicated by the growth of a tumour, and are really cases of spina bifida occulta. Börst divided congenital tumours complicating spina bifida occulta into three classes: (1) tumours originating from the meninges; (2) gliomata growing from the cord itself; and (3) mixed tumours, combined with spina bifida, and masking it. The so-called sacro-coccygeal tumours are said to have rarely any association with spina bifida occulta.

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An Address

ON

THE DIATHESES: THE PERSONAL FACTOR IN DISEASE.

Delivered in French before the Faculty of Medicine of Paris on Feb. 18th, 1908,

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MESSIEURS MES CONFRÈRES,—One of my first duties is to thank those of my *confrères* who have made it possible for me to address you to-day. To speak from this place, which has been filled by so many of the greatest ornaments of our profession, is indeed a great honour and privilege for me. Many of us had anticipated that this, the first address given in this country as the outcome of the *entente cordiale médicale*, would have been delivered by our late Président d'Honneur, Sir William Broadbent. Alas, we have to lament his unexpected decease and to mourn the loss of a great clinician, a kind friend, and one who well represented British modern medicine. It has fallen to me as President to take his place to-day. We cannot know what subject he would have touched on this occasion, but we may feel sure that with his interest in the Parisian school and his large appreciation of French ideas he would have enlisted the fullest sympathy of such an auditory as is now before me. For myself, I can only say that I cherish a similar interest in the teaching and methods of the French school, gathered by personal observation and fruitful study of the best work done in it. I have therefore ventured to discuss a subject to-day which is, so far as I know, for the most part of French origin, and which has been treated by some of your greatest clinical masters in the past. I allude to the doctrine of the diatheses.

LES DIATHÈSES: LE FACTEUR PERSONNEL DANS LES MALADIES.

The doctrine of the diatheses as applied to practical medicine is little in vogue in this twentieth century. It is now commonly supposed to be a survival, and a rapidly decaying one, of mediæval modes of thought applied to a humoral pathology, and now rendered effete and useless in the face of the revelations of bacteriology.

I do not stand here to-day to decry progress in any field of medicine. Our art can but die if it does not advance, and happily there are signs on all hands of progressive researches of which some at least are sure to be fruitful. Let us always remember that research is only properly prosecuted for the sake of enduring truth and not merely to supply material for publication in ephemeral journals or contributions to medical congresses and societies. While, therefore, I am in full sympathy with all duly prosecuted research, I am not prepared to turn my back on all the solid acquirements of the past, to regard my great predecessors in medicine as unwise and ignorant men, and to believe that the microscope and the x rays have heralded the dawn of an entirely new era. Truth is eternal and there can be no fashion in it. The tendency is to adopt the new revelation and to ignore or despise the old. I think this is a dangerous error. We physicians take perhaps too many of our novelties from the laboratories of the physiologist, and we repose, it may be, too seriously on the pronouncements of men who, if not void of any clinical experience and instincts, certainly are not practical physicians in daily contact with the maladies of humanity.

The teachings of the *clinical* laboratory are the proper study of the physician. We need far more of these than are provided for us. We have, as I say, to deal with humanity, and the problems presented by man, both in health and disease, can never be solved satisfactorily by experiments on the lower animals. We learn much from the latter and must still pursue them, yet they must ever be inadequate to answer all the inquiries of the clinician. Our great study is man from birth to death and all that relates to his habits and environment.

One result of our modern studies is to lead us to regard

men as living units with an exact bodily conformation, an uniform trophic system and tissue metabolism, and to disregard textural peculiarities, definite proclivities, and variants of intimate metabolism. A very little consideration makes it clear that this is not true, and multitudes of instances at once disprove this view which is evolved in the laboratory of the physiologist and contradicted at the bedside. We all surely recognise that our fellow men are not all of one constitutional type, but we have ceased in late years to speak of the various temperaments such as the sanguine, the bilious, and the nervous as described by our predecessors. I would ask if such types have ceased to exist amongst us, or, if not, is there no longer any significance in them? Are we prepared to declare that the incidence and processes of disease in any one of these are met in precisely the same way and that the reactions and results are alike and common to them all? The fact is that we no longer think much about these human varieties and these personal qualities, and rather act now as if we were following out experiments in a physiological laboratory. Hence the outcome of errors and strange teaching, as when, for instance, after poisoning small animals with pure alcohol, we are solemnly told that to take a little good wine or beer is a most pernicious habit for civilised man! That nonsense is to-day regarded by some members of our profession as an illustration of the progress of science, and as a contribution to knowledge which is to aid us in our art and to reclaim the victims of alcoholism!

The clinician is always in face of the *personal factor* in each patient. The physiologist has a dog, or a guinea-pig, or some definite organ of an animal, but rarely a man, before him. The problems are not the same, and never can be. The personal factor, then, demands careful study from the physician, for men and women are not so many wooden ninepins turned in a lathe as some would have us believe. This study was carefully prosecuted by the best observing physicians a century ago, and nowhere more profoundly than in this great school. From my early days in medicine this subject has had great interest for me, and I was imbued by my dear master, Professor Laycock of Edinburgh, with its principles. It is true that early dogmatic teaching sinks deeply, as it should do, and is not easily displaced in favour of other beliefs, but a long clinical experience has only served to deepen my confidence in the certainty of the doctrine of the diatheses or habits of body. The primal significance of this doctrine is that one man is not as another, that there are individual personal peculiarities relating to tendency, to vulnerability, and to immunity. It can be shown that these qualities run in certain families, that they may be accentuated in the offspring of consanguinity, and diminished by alliance with a stock presenting none of these tendencies. We thus meet with many examples of blended constitutions, and witness the outcome in one member of a family of the peculiarity of one parent, and in another the special tendencies of the other parent, or we find the malign proclivity of one parent overcome by the more robust influence of the other.

While we no longer speak of the several temperaments formerly described we may certainly recognise at least four special habits or types of body—the arthritic, the scrofulous or lymphatic, the nervous, and the bilious. In varieties of these I think we may find all the conditions which were differentiated by our predecessors. It becomes, therefore, a question relating to the *soil* or tissue-proclivity of the particular individual that we have to consider. The modern investigator is solely occupied with the *seed* which he believes to be capable of growing and developing its widespread powers indiscriminately on any individual. He regards the soil as of no importance. Those who, like myself, would call a halt in this narrow and limited conception, while accepting to the full all the teaching of bacteriology with gratitude, insist upon the vast importance of the soil or special textures of the individual invaded by specific microbes. We have to reckon with seed and soil, not with seed only. Surely we have an exquisite analogy here in the sister vegetable kingdom which cannot be ignored. For example, let us try to grow roses in sand, or conifers on chalk, and watch the results. Hence we find no difficulty, but, on the contrary, further enlightenment, in applying the new teaching of bacteriology to the several diathetic habits of the body.

This question has recently been the subject of discussion in this city,[1] and in relation particularly to the existence of a *diathèse arthritique*. M. Guyot denied in this discussion the existence of such a diathesis and had regard to no element in the case of rheumatic maladies but the specific infecting microbe. When reminded by M. Weber of "les tares héréditaires, ou acquises," which created a predisposition, M. Guyot replied that these were "not indispensable." Such a belief is, in my opinion, inconsistent with an accurate clinical instinct and is contrary to common experience, for if it be true, any person may become the subject of rheumatic maladies which we know are not indiscriminately prevalent, even if widely spread. M. Guyot thus defines arthritis: "Une maladie générale, causée par l'action sur les divers organes, systèmes ou tissus, du diplocoque rhumatismal ou de ses toxines, et le lien qui réunit les divers syndromes de la maladie est le microbe en question." I have no objection to his definition but I would add in order to complete the full conception of the pathogeny that, in order to secure the several manifestations of the specific infection, there must be a special favouring proclivity in the tissues of the particular patient, in other words a suitable soil for the development of the infecting element. Such patients may be regarded as rheumatically disposed and it is a matter of common knowledge that such persons exist and are distinctly more liable to rheumatic infection than others. I have no doubt as to the existence of this proclivity, and I have long accepted the doctrine of the *diathèse arthritique basique* of Bazin. Those who are the subjects of this particular habit of body show plainly their liability to rheumatic infection which I term *exogenous*, and no less to the onset of gout, a malady which I regard, in the absence of exact proof to the contrary, as due to endogenous toxins, derived from perverted metabolism in the individual. M. Guyot has decided for himself that the peccant matter of gout is the same as that which originates rheumatism in all forms—viz., the diplococcus. This on the ground that many of the articular lesions in the chronic varieties are closely similar in both cases, the uratic deposits being mere epiphenomena and not constant, according to his view. I have elsewhere discussed this matter and shown that there are specific changes in gouty arthritis, apart from uratic deposit, which are not met with in rheumatoid cases.

There are those in England now who are disposed to regard the toxic element of gout as generated from intestinal microbes. When these are plainly demonstrated to us I shall be prepared to reconsider the question of the endogenous or exogenous etiology of this malady. If we advance *toujours*, we must advance *tout doucement* and always be ready to say *nous ne savons pas encore*. As there are people who under provoking conditions cannot become rheumatic so there are those who cannot under predisposing circumstances become obviously gouty. The tissues of these persons and their metabolic processes do not favour the onset of either condition; they are practically immune and are not subjects of the *diathèse arthritique*. Those who believe that microbic infection entirely explains all the phenomena of rheumatic and gouty diseases, and that these may therefore be produced indiscriminately, have to show cause why these maladies are not universally prevalent and to explain how the majority of persons happily resist this influence and escape these ailments.

If we study carefully the life-histories of arthritic and other diathetically disposed families over long periods we shall not fail to discover good reasons for belief in the special predisposing conditions which prevail and are inherent in their different members. This arthritic diathesis is certainly widely spread but it is not universal. It includes most persons who used to be described as of sanguine temperament.

We have next to note a marked feature of the *diathèse arthritique* which consists in the peculiar antagonism of the tissues towards invasion by, and development of, the bacilli of tubercle. The more rheumatic or the more gouty the patient the less the proclivity to tuberculosis. I learn that the École de Lyon *tente de faire rentrer l'arthritisme dans la tuberculose*, but this conception is beyond my comprehension. All my experience confirms the distinction between these two conditions, *si non absolue, du moins très grande*. Tuberculosis in the rheumatic, and especially in the gouty subject, is extremely rare, and when it occurs is found to make slow progress, with frequent arrests, and to be vigorously resisted. When such a liability exists it will probably be discovered that there is an inherited taint due to blending of a *diathèse scrofuleuse ou lymphatique* with the *diathèse arthritique*, for such blendings cannot fail to occur, and this fact of commingling of different habits of constitution may not seldom

[1] Bulletin Officiel des Sociétés Médicales d'Arrondissement de Paris et de la Seine, 5 Fev., 1907.

explain many puzzling variations in the course and outcome of maladies such as syphilis, paludism, &c.

In respect of the gouty habit of body we may note some further peculiarities. One is the marked vulnerability to the toxin of the gonococcus. This microbe is a veritable *pierre de touche* for gouty proclivity, and is apt to lead to some of the worst and most rebellious conditions due to this infection. Another is the occurrence of the palmar sclerosing contractures of Dupuytren which, in my experience, have no connexion whatever with rheumatic infection, but are met with exclusively in persons already gouty or strongly predisposed to gout. Again, the prevalence of eczema and glycosuria are marked features in subjects of this constitution.

We find that both arthritic and scrofulous subjects are specially vulnerable in their joints. Injuries to these structures heal slowly and are apt to leave permanent deformities as sequels. The fact of a lingering arthritis may thus, for the first time in a patient's history, disclose a hitherto unsuspected gouty or scrofulous taint, as was first pointed out by Paget. With respect to such cases I would ask, is it not probable that a study of the family and personal life-histories of such patients would have previously declared to the observer the special proclivities of the affected individuals? It is, however, declared by some physicians that it is not possible to pronounce a person to be the subject of any diathesis until he becomes obviously rheumatic, gouty, or tuberculous, just in the same way that no one can be regarded as suffering from syphilis until he is infected with the toxin of lues venerea. To my mind, such a declaration indicates too plainly an absence of clinical acumen and experience.

Once more, we certainly find that the diet which is appropriate for the subject of the *diathèse lymphatique* is extremely bad for persons of the *diathèse arthritique*, and one which is suitable for the latter is most unfit for the former. I would ask again, "Est-ce que c'est ici seulement une affaire de microbes?" What is it, then, which is transmitted in this or any other diathetic habit of body? Surely it is the quality of the tissues, or the soil, and not the infecting microbe. The proclivity, the vulnerability, the degree of immunity or resisting power is transmitted as a peculiar vital endowment from early embryonic times to full maturity in the intimate cells and tissues of the individual. In this sense each person is a law to himself, and here we have the *facteur personnel* before us with which we physicians have always to deal.

We are now told that the older conception of a *diathèse scrofuleuse ou lymphatique* is no longer tenable. This, it appears, was also a foolish mediæval doctrine now absolutely exploded and rejected since the discovery of Koch's bacillus. Scrofula is now regarded as tuberculosis! To this new doctrine I venture to demur and I regard it as a monstrous absurdity. To prove it requires us to believe that every person presenting the classical features and type hitherto recognised as scrofulous is, from the earliest age, even as a fœtus and throughout life, invaded and influenced by the bacilli and toxins of tubercle and that this infection is responsible for the bodily conformation, characteristic ailments, vulnerability, and tendencies shown by the subjects of this condition. This is surely bacteriology run mad. Here again, as in the case of the *diathèse arthritique*, we recognise the soil and the seed and have come to learn that the *diathèse lymphatique* provides the best medium for the cultivation of the bacilli of tubercle. We have long known that the textures of the scrofulous subject are vulnerable beyond all others and offer little resistance to intruding toxins of all kinds; that their lympharia are unduly sensitive to all forms of irritation, that their mucous surfaces are predisposed to catarrhal conditions. Thus they are bad subjects for all maladies, make slow recovery from them, and often succumb to them. We recognise that they are more liable to become tuberculous than others and are thus often a prey to the omnipresent bacillus of Koch. It is supposed that this bacillus is present in a latent condition in such persons and declared that this microbe may enter the fœtal circulation. The evidence for this is indeed slender. I prefer to believe that these subjects are born constitutionally feeble with a delicate lymphatic system and thus provide a bad soil for all varieties of infection. I recognise in the scrofulous subject the *ens in potentiâ*, in the tuberculous subject the *ens in actu*. The characteristic features of this diathesis are constantly before us in the two physiognomical and differing types of ugly and pretty struma. It would surely be strange if these well-marked varieties were each the result of the same transmitted microbic intrusion. I do not believe it. But, alas, the modern physician has largely ceased to make physiognomical diagnosis of morbid tendencies and states or to teach this part of clinical medicine.

It is not sufficiently realised that these several habits of body persist through life. Scrofula is commonly supposed to pertain to youth only, but we may meet with its peculiarities in aged persons (senile struma, not tuberculosis). So with the arthritic habit whose indications appear early in life by various symptoms, not necessarily overtly rheumatic in character, for these await the intrusion, sooner or later, of the specific infection which develops the angina, the arthritis, the carditis, the erythema, or the chorea, while in later life under special provoking conditions the perverted metabolism gives rise to gouty symptoms and the consecutive changes in the cardio-vascular and renal systems. I therefore entertain the opinion that it is possible to be scrofulous throughout life without becoming tuberculous, and to be arthritically predisposed without becoming rheumatic or gouty in any classical form of these maladies. These conditions and developments are accidental and not inevitable, and may conceivably often be avoided by prudent and careful measures. *Pace* M. Guyot, then, these diatheses or predispositions, whether *crées par des tares héréditaires, ou acquises*, have much to do with the individual impressed by them. It is obvious that persons who present the character in well-marked form of the two diatheses which I have referred to are to be considered delicate and void of a normal or robust constitution.

I have referred to the blending of these habits of body as the outcome of heredity and tendencies passed on by each parent. Thus we may meet with strumous arthritic or a blend of arthritic and scrofulous constitutions. Syphilitic taint may modify one or other of these, the result in the scrofulous case being very severe. Such blendings may be in variable degree according to the greater predisposition of either parent, the male characteristics more commonly reappearing in the female progeny and the female ones in the males.

The old physicians described a *diathèse nerveuse*. We hear nothing of this term now, but we surely recognise the subjects of an over-sensitive and delicate nervous system, with a tendency to instability, to the several neuroses and mental aberration. Such qualities as these may be blended in subjects already arthritically impressed, scrofulous, or bilious by inheritance, producing strange and modifying complications whose source is hard to seek if the ancestral taints are not looked for and duly appreciated. In this fashion, if there be exposure to certain infections, chorea or cerebral rheumatism, we may explain the occurrence of toxic insanity and an impressionable and unstable brain showing little resistance to such influences.

The bilious habit of body is sufficiently well recognised. It is commonly met with in the Celtic race and in Southern Europeans. The term "bilious" is suggestive of hepatic over-activity, but the main incapacity of such subjects lies in the digestive system and in many instances is due rather to hepatic inadequacy. We often meet, as may be expected, with blends of this constitution with others, as in the case of neuro-bilious or bilious arthritic subjects. One striking peculiarity of this tendency is the toleration for, and beneficial influence of, mercury in many of the ailments suffered by persons of bilious habit. No other drug can replace mercury in such cases. This is in marked contrast to its effects on persons of the scrofulous constitution who bear it badly.

By the light of modern clinical research into the subject of vaccine therapy, so fruitful in the hands of Wright, Douglas, Opie, and others, especially in the Pasteur Institute, we may gain fresh knowledge respecting the respective inherent properties of the tissues in different individuals, and hope in time to learn whether there be varying or definite powers of resistance to intruding infective agents. It would be of profound interest to ascertain whether, as a rule, there be greater or less protective power in the leucocytes with their digestive ferments, or more or less anti-bacterial substance in the blood of the subjects of the different diatheses. We may fairly conceive that variations of this nature exist, and the clinical laboratory can be the only source of such knowledge. Research of this kind, adequately carried out, would hardly fail to throw light on the now discredited doctrine respecting different habits of

body. On my part, I am bold enough to predict that the results of such an investigation will tend to support the belief in the specific peculiarities and proclivities of each of them, and I may add that I cannot conceive of any better method of increasing our knowledge of this subject.

I am well aware that I have been venturesome in stating my beliefs to-day on this doctrine of the diatheses. I feel sure that they will arouse some incredulity, and perhaps be regarded as a futile effort to fan into flame once more the dying embers of a fire that burnt brightly a century ago; that they are no longer consistent with the enlightened teaching of to-day which is nothing if not new, and which would at once command the assent of our great predecessors were they to revisit us here and now. That is not my point of view. I think we have to fit the new on to the old in this case and to beware of mere novelties, for we know well that what is new is not always true. I am ready to allow that to-day we have to discard much of the teaching of the older physicians, but we have to save and cherish the truth which they brought to light and to hand it down to our successors. I am still young enough to learn but not too old to forget. A long clinical experience bids me to tell of the practical value of the doctrines I have just discussed. I think it is necessary and incumbent for the modern physician to revert to the older teaching respecting the particular constitutions and proclivities of his patients. I am aware, for example, that some authorities have been led to discard the doctrine regarding the *diathèse arthritique* because they could not accept to the full the later teaching implied in the comprehensive terms "*arthritisme*" or "*herpetisme*," which have gone far beyond the original definition; but I maintain that there need be no hesitation in recognising the type signified, and the various textural and organic defects which are met with in the outcome of this particular constitution.

Lastly, I would urge that in all our schools of medicine we should strive to secure more light on the processes and results of disease from labours conducted in clinical laboratories such as are so well supplied and ably utilised in this great school. It is invidious to mention names in this connexion, but my memories of past visits here recall to me work done under the direction of Charcot, Lancereaux, Bouchard, Marie, Chauffard, Landouzy, Widal, Babinski, and many others yielding brilliant results.

Again, one point more. We are, I much fear, suffering in these days from a widely spread spirit of incredulity, timidity, and hopelessness in the whole realm of therapeutics. We spend much time in cultivating elaborate diagnosis, and this is quite right, but we grievously neglect our main business as healers and mitigators of disease. Our knowledge of the materia medica has declined out of all proportion to that gained by the progress of bacteriology which claims to supersede the older therapeutical art. It will never supersede it, for there are, as Sir William Jenner said, but two great questions to be answered at the bedside of a sick man—what is the matter with him? and what will do him good? Are we not too apt to-day to forget the second question, to experiment with synthetical novelties, and to neglect the old long-approved remedies? In short, are we not, as physicians, slowly drifting into the position of abstract scientists and gradually losing our proper relation to the sick as skilful medical artists? What would that greatest of clinicians, your glorious Trousseau, say to us were he amongst us to-day? I ask you messieurs mes confrères, in leaving this tribune, to allow me to salute, in the name of my country, the memory of that great man.

THE CANCER HOSPITAL.—The fifty-seventh annual meeting of the governors of this charity was held at the hospital, Brompton, on Feb. 26th, the Earl of Northbrook presiding. From the report of the committee it appeared that during the year 1907 there were 804 new in-patients, whilst the average number of beds occupied was 92. In the out-patient department 1580 new cases were treated, the total number of attendances for the year being 15,809. Owing to the deficiency of the ordinary income it had been found necessary to realise between £6000 and £7000 from capital to meet expenses. The report showed that there had been a further increase in the amount of work done in the pathological and research department and that pathological investigations were being carried out with a view to throw light on the causation, spread, and prevention of the disease. The new museum had been completed and specimens of great interest and value were being constantly added. The report and balance sheet were adopted.

A Clinical Lecture

ON

A CASE OF AORTIC ANEURYSM WITH EXTENSIVE ARTERIAL DISEASE.

Delivered at the West London Post-Graduate College

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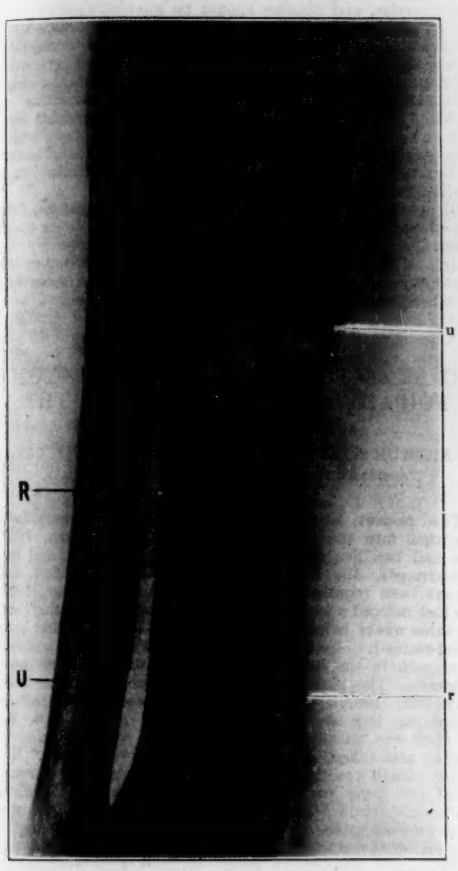
GENTLEMEN,—I show you this case as one which illustrates the advantages of the skiagram as an aid to diagnosis. I may say at the onset that it is a case of extensive disease of the arteries with an aneurysm of the aorta which, however, affords none of the typical signs. It would be better, perhaps, if I gave you at the onset a brief account of his case.

The patient, a painter, aged 59 years, but looking considerably older, came to the out-patient room some six weeks ago complaining of dysphagia. This trouble had begun about three months ago; it had gradually increased until lately he could only swallow liquids, all solid food being returned almost immediately after deglutition and of course unaltered. He had not lost flesh up to the onset of his trouble and only slightly since, and no more than can be accounted for by the deficient food which he has been able to pass into the stomach. This is important as bearing on the question whether the obstruction was due to malignant stricture. My esteemed colleagues, Dr. H. Pritchard and Mr. J. G. Pardoe, who first examined the case in consultation, carefully auscultated the patient but could discover no signs of aneurysm, for as I have stated no signs exist. An œsophageal bougie was thereupon carefully passed by Mr. Pardoe and an obstruction was found 12 inches from the incisor teeth. With some manipulation the bougie was wormed past the obstruction into the stomach and the method of its passage suggested to Mr. Pardoe that the obstruction was outside the œsophageal tube and not due to new growth in its walls. Bearing this in mind the patient was sent to the x ray department, where a skiagram was obtained by Dr. David Arthur which revealed the existence of a rounded tumour of about the size of a walnut in the third part of the aortic arch, which from its shape and appearance is no doubt a saccular aneurysm. The patient was then admitted to my ward.

On examination you will see that he is older than his years. His vessels are hard, tortuous, and nodular. His radial arteries can only with difficulty be compressed and on running your fingers along them they are felt to be corrugated, "contorted, and irregularly annulated," and give one the impression which would be conveyed by the feel of a piece of ipecacuanha root or a fine curb chain. (See skiagram.) The femoral arteries are in the same condition, and whilst the posterior tibial and the dorsalis pedis arteries can easily be felt as nodular cords, any pulsation in them can only with difficulty be recognised. The temporal and facial arteries are similarly affected but to a lesser degree. There is ample evidence, therefore, that he has widely diffused calcareous degeneration of his arterial system. If a man may be said to be as old as his arteries then our patient may be regarded as being 109 years old rather than 59. The apex beat of the heart is just in a line with the nipple. There is no area of dulness to the right of the sternum. There are no abnormal sounds at any orifice and the second aortic sound is not more accentuated than the second pulmonic. The lungs present no deviation from normal except that an occasional dry rhonchus is heard over the bases. Air enters both lungs equally and there is no want of symmetry in the two sides. There is no abdominal tumour or enlargement of any abdominal organ. The bowels are constipated but act daily by the help of sulphate of magnesium. He has never had dropped wrist or suffered from lead colic, but a blue line is seen at the edge of the gums. The urine has a specific gravity varying from 1015 to 1020 and contains neither albumin nor sugar. Some hyaline casts are found by the microscope.

The skiagram of the chest reveals a rounded tumour springing from the third part of the arch, on the fifth dorsal

vertebra, which from the evidence afforded by the condition of the vascular system, by the shape of the tumour and its obvious relation to the aorta, together with the absence of any evidence of neoplasm, or the cause of neoplasm elsewhere, makes the diagnosis of aneurysm fairly certain. It must, however, be admitted that aneurysms in this site are most difficult to detect owing to want of signs and that they



Reproduction of skiagram of right forearm in semi-prone position showing calcareous changes in the arteries, in aortic aneurysm. R, Radius. U, Ulna. r, Radial artery. u, Ulnar artery.

are more overlooked here than in any other locality. It will be asked if there are none of the cardiac signs, why is the diagnosis of aneurysm made? The wonder is that with such a diseased condition of his arteries he does not show evidence of aneurysm elsewhere. It is true that he has none of the classical signs—not even the diastolic shock, or rebound of blood, caused by the systole of the sac, on to the semilunar valves. But diagnosis in medicine does not stand still, and what 20 years ago could only have been in a similar case conjecture founded on the state of the man's arteries, is now rendered positive by the evidence of the new developments of photographic discovery. Here in this negative plate we see the outline of a tumour apparently springing from the end of the arch about the fifth dorsal vertebra and in such a position as to impinge on the gullet at a distance of about 12 inches from the incisor teeth. There is tenderness over the fifth and sixth dorsal spines. There can be no suggestion of bony exostosis here, as the shade of the photograph of this tumour is distinct from the shade of the surrounding bony tissues, whether vertebræ or ribs. Nor is there evidence of new growth in the mediastinal gland or of any other lymph gland in the body. We can therefore only fall back on aneurysm as the cause of his trouble and we base our diagnosis chiefly on the condition of the man's arterial system, the localised pain over the fifth dorsal vertebra, the photograph or skiagram showing a tumour in relation with the arch of the aorta, which causes dysphagia, a sign which of course is not diagnostic of aneurysm but strongly confirmatory in the presence of the evidence which we already have.

Perhaps it would be as well to discuss seriatim the so-called pressure signs and to see whether our patient has any of them other than the dysphagia: but I would warn you that these pressure signs do not always follow the course in chronological order which anatomy would indicate or our text-books describe. I must first remind you that they are none of them pathognomonic of thoracic aneurysm: they are common to all neoplasms and other tumours, fluid or solid, which impinge on one or more of the many tubes, nerves, and vessels in the immediate neighbourhood of the arch.

Beginning with dysphagia, of which our patient complains, it is a symptom which is complained of mostly, so far as aneurysm is concerned, when the sac originates from the second part of the arch, and to a less frequent degree when the third part of the arch is involved. But in our patient a not unusual amelioration of this symptom has taken place since he has been admitted to the hospital, and this to my mind is strongly significant of the correctness of our diagnosis. He can now swallow soft foods, such as finely minced mutton and soft, well-boiled fish. This variation in the degree of dysphagia is common in aneurysm. This symptom may disappear for weeks or even months at a time and then reappear. There are various ways of explaining this. One must not suppose that even a saccular aneurysm is always a single-chambered sac, or merely a forced-out diverticulum of the parent tube. On the contrary, a number of cases which I have examined post mortem and the evidence afforded by our museums teach us that an aneurysm is most frequently a sac with saccules, a chamber with recesses, and the contour of an aneurysm shows pinchings in here and distensions there, so that on section it resembles a tomato rather than a bulb. Admitting this, it will be readily recognised how easily pressure is exerted in this direction for one period, or in that direction for another, the alternation probably depending on the disseminated patches of weakness in the walls of the sac, and also on the varying lines of least resistance. Further, we must recognise that the sac may alter its relative position and ensconce itself, after exerting pressure on some tube, duct or vessel, in the furrow formed by the vertebral column and by the angles of the ribs. Also that the stretched or compressed œsophagus may accommodate itself after a time in the sulci of the outer wall of the sac, and indeed that both displacement of the sac and accommodation of the gullet may together occur in the same patient.

Irregularity in the radial pulses we should not expect in our patient, as the aneurysm is beyond the origins of the vessels which supply the upper limbs. But here I would caution you against too readily accepting a statement in proof of obstruction that one or other pulse is stronger or fuller than the opposite one. We are many of us prone in our zeal to find that which does not exist, and to fancy we recognise inequalities in pulse volume which are not present. Unless the disparity is well marked or unless it is easily distinguishable by a sphygmograph used with identical pressure on both radial arteries, I count any small or dubious inequality of no diagnostic value, for many subjects have radial vessels with asymmetry both as regards size and volume.

Again, in considering inequalities of pupil we may easily lead ourselves, or be led, into error. Some of you have thought that our patient's left pupil was smaller than his right and have therefore inferred that the aneurysmal tumour is exerting pressure on the left sympathetic nerve chain. Well, the difference, if there be any, is so small that without careful measurement by a scientific instrument I should hesitate to accept any statement one way or another. But any wide discrepancy is, of course, a valuable sign of the existence of pressure on one or other sympathetic chain. Given the obvious fact in a case of supposed thoracic aneurysm that one pupil is markedly larger than its fellow, then we have strong evidence of the existence of a tumour exerting pressure. But here again a difficulty assails us. If we do not know the normal size of our patient's pupil we may think that one pupil is dilated, whilst what really exists is a somewhat lessened diameter of the opposite one. If a marked discrepancy exists we are often still in doubt, especially if the site of the aneurysm is not very evident, whether the tumour pressure is sufficient to produce a

stimulating effect on the sympathetic and therefore a dilated pupil on the corresponding side, or a paralytic pressure effect with consequent apparently contracted pupil in the opposite side. All that marked inequalities in the pupils teach us is that on one side or the other some pressure is being exerted, but the exact site of the pressure and its degree remain doubtful, although the pupil reflex may at times help to determine which side is affected.

Tracheal tugging is present but in a slight degree. This sign when elicited is a most valuable one. It is not always present, but when it is it may be almost regarded as pathognomonic of aneurysm. I may say that I have frequently failed to observe it in cases of undoubted thoracic aneurysm, but I have, on the other hand, always found that when it did exist the patient was the subject of this distressing condition. In no other disease have I observed it.

Another sign allied to tracheal tugging is tracheal or expiratory whiff, a peculiar puffing sound heard, during expiration only, when the listener places his ear in front of the patient's mouth. This sign is best heard when the aneurysm involves the second portion of the arch and is pressing directly backwards on the trachea. It may be compared to the puffing sound which is occasionally heard emanating from the exhaust pipe of some small stationary steam engine. It is, of course, synchronous with the systole of the ventricles and is due to the sudden and increased expulsion of air during expiration from the trachea—a series of sound waves during the expiratory tide. Occasionally this sign is more easily detected by allowing the patient to place the bell of the chest piece of the stethoscope in his mouth, holding it in position by his lips and not his teeth. By this manœuvre the auscultator can at times detect the sign which otherwise would be missed. It is a most valuable auxiliary sign when present and though I should have expected to detect it in our patient I fail to do so. Probably the left bronchus is not extensively impinged upon and hence the sign is absent.

As regards treatment I have little to say that is new or original. But one conviction is firmly fixed in my mind. Notwithstanding the many triumphs which surgery has gained in the domain of medicine the cure or even the amelioration of thoracic aneurysm is not in its category. I have, drawing from my records of hospital practice, seen 17 cases in all, in whom various filaments, wires, horsehair, catgut, and also foreign bodies were introduced into the sac. Included in this number were two cases in which needles connected with an electric battery were introduced into the tumour, and a spark thus passed from one pole to the other. All these measures were taken with a view to favour coagulation. But in every one the result was disastrous. I ought perhaps to qualify this adverse opinion by drawing your attention to the success which has attended ligation of one or more of the large arteries which spring from the arch, as practised by Mr. Richard Barwell and others. But any operative procedure on the sac itself I would discountenance.

Nor would I, with the light of the recent experience of other physicians, advocate the introduction of gelatin injections subcutaneously. To inject a coagulable fluid, say, into the buttock with the hope, and maybe the silent petition, that it may go into the sac is, I think, a hazardous procedure. It may go into the aneurysm. If so, good. But remember you have lost all control over the course of the injection as soon as it is completed. It may not fill, and in some instances it may not even enter the sac, but follow the course of the carotids to the brain, where it is fair to presume the vessels there are in the same unhealthy state as the aorta must be. And if this catastrophe should occur the last state of our patient would be worse than the first.

Nor am I in favour of the prolonged rest in bed, with large doses of potassium iodide, or without that drug. I have seen two cases in whom after a year's sojourn in bed sudden death occurred within a few days of their getting up, although the opinion was expressed that the patients were better and the aneurysms diminished in bulk.

It has always seemed to me that such treatment is as much calculated to do harm as good. The condition of the patient is impaired, his tissues are lessened in tone and in resisting power, as compared with a man who, though an invalid, is allowed to take gentle exercise out of doors, or even to follow some quiet occupation. In support of this I would mention amongst other cases that of a gentleman who showed signs of aortic aneurysm when he was 50 years old. The condition was explained to him, yet he firmly resolved not to rest, but continued his occupation, taking every precaution, and ultimately died, aged 68 years.

Then I can imagine you asking what treatment I advise in this distressing disease. Briefly I would say that we should be candid with our patient and tell him something of his condition and danger. We should forbid any occupation or even amusement or relaxation which quickens the pulse-rate. Alcohol, especially spirits, should be forbidden; excitement, controversies, and debates should be guarded against; and his general mode of life made as even and uneventful as circumstances will allow. If a labourer, let him, if possible, obtain a post of time-keeper; a hammerman must seek some occupation which is less strenuous. The richer patient should retire from his occupation if it be exacting or exciting, and in short he should, no matter what his age, look on the rest of his life as the evening of his days, which may be a long or a short one, according to the general health of the body and the care which he takes to maintain that health.

Of course, one's experience, however great it may be, does not embrace a large number of cases, and statistics based thereon may be fallacious. But if I may judge by the figures at my disposal, the longevity of cases treated on the above lines is considerably more extended than in those who have been treated by prolonged rest and medication.

A CASE OF WERTHEIM'S HYSTERECTOMY FOR ADVANCED CARCINOMA OF THE CERVIX.

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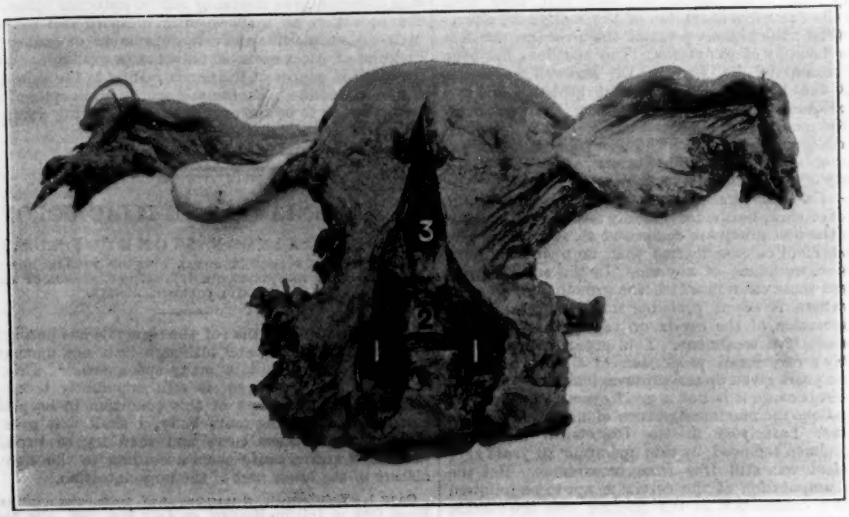
THE patient, a married woman, aged 46 years, was admitted into the London Hospital on June 27th, 1907. She had had five children, the last 16 years ago, and two miscarriages, the last 14 years ago. Menstruation had always been regular and painless. Since December, 1906, she had noticed a vaginal discharge "like dirty water" and for three weeks before her admission the discharge had been blood-stained. She had also for the last few weeks suffered from pain in the lower part of the back and in the lower abdomen. The patient was examined under anæsthesia on July 2nd, 1907. Nothing abnormal was discovered on examining the abdomen. On vaginal examination the os uteri was patulous, and its margins were irregular in outline and sharp, especially behind and to the left. The finger passed readily into a chasm occupying the cervical canal and lower part of the body of the uterus, lined by malignant tissue. The discharge from this cavity was extremely offensive. The uterus was very fairly moveable. The malignant ulcer was swabbed freely with pure tincture of iodine and packed with gauze, which was removed on the next day.

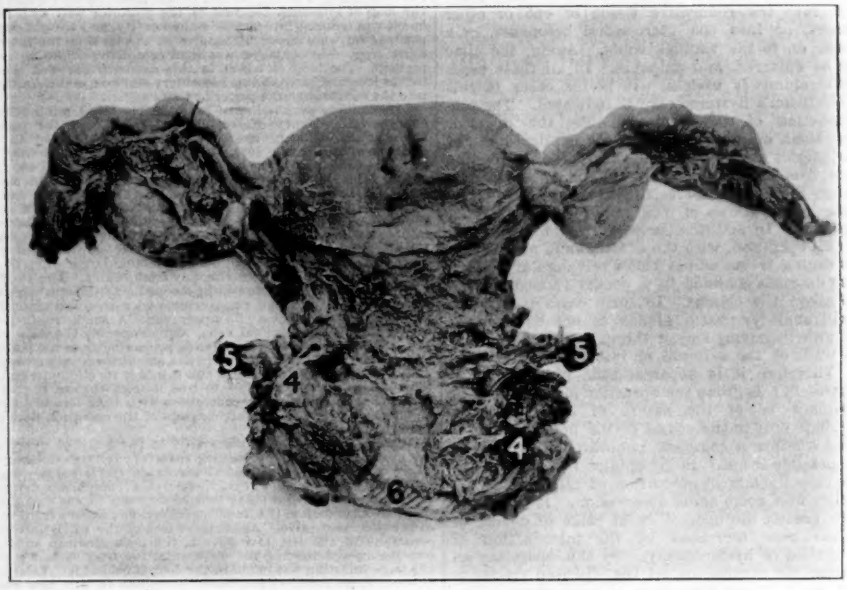
Operation was performed on July 4th, 1907. Abdominal hysterectomy was done by Wertheim's method. There was no particular difficulty in dissecting out the ureters, but a good deal of difficulty was met with in separating the bladder from the supravaginal cervix. There was, however, no evidence that the bladder wall was infiltrated by the new growth, and ultimately the bladder was freed without injury. Before the rectangular clamps were applied to the vagina an attempt was made to disinfect it by injecting from two to three ounces of tincture of iodine with a syringe. The excess was removed by gauze swabs. The clamps were then applied and the vagina cut across below them. A few bleeding points on the cut vaginal walls required ligatures. A gauze drain was then drawn down into the vagina and the peritoneal flaps were sutured over it. The abdominal wound was then completely closed. The patient made a good recovery. The gauze was removed on the sixth day and was rather offensive. From the sixth to the tenth day there was a gradual rise of temperature, which reached 104·2° F. on the tenth day; after this the temperature rapidly declined as the purulent discharge from the vagina diminished. There was no trouble as regards the urine, no incontinence, nor anything abnormal in the urine itself. For the first few days the catheter was passed every six hours. The patient left the hospital on August 7th, 1907. She came to see me just before Christmas and I examined her. The scar at the top of the vagina was quite healthy and there was no sign of recurrence.

FIG. 1.



Posterior aspect of the specimen, which has been laid open from behind. 1 1, The deep excavation caused by the malignant ulcer, which extends highest on the left side. 2, Median ridge on the anterior cervical wall which has escaped ulceration. 3, Cavity of the uterine body.

FIG. 2.



Anterior aspect of the specimen. The cut ends of the uterine arteries (5 5) are well seen. The loose parametric connective tissue (4 4) is also seen. 6 marks the vaginal wall. The serrated marks left by the clamps are clearly seen.

The figures give a good idea of the specimen removed. Fig. 2 especially shows the considerable amount of parametric connective tissue that may be removed in hysterectomy by Wertheim's method. The cut ends of the uterine arteries are seen, which have been tied and divided external to the ureters. In Fig. 1 the uterus has been laid open from behind and the extensive character of the malignant ulceration is well seen; the highest point of the ulcer (on the left side) lies in the body of the uterus. The specimen has been thoroughly examined by Dr. R. D. Maxwell, obstetric registrar at the London Hospital. The growth itself is a squamous carcinoma. Sections taken from the peripheral portion of the parametric connective tissue (Fig. 2, 4 4) show no sign of malignant invasion. The specimen and sections were shown at a meeting of the Obstetrical Section of the Royal Society of Medicine on Jan. 9th last.

Remarks.—Cases of carcinoma of the cervix may, from the clinical point of view, be divided, broadly speaking, into three groups. In the first group are comprised those cases where it is at once evident on examination that no operation, however extensive, would be of any use. In the second group may be placed those cases in which the growth is in an early stage, and where it seems probable that either the supravaginal amputation of the cervix or vaginal hysterectomy would be an effective treatment. This group unfortunately contains only a very small proportion of all the cases. I have for some years given up the supravaginal amputation of the cervix, not because it is not a good operation as regards giving the patient the maximum chance of non-recurrence in suitable cases. Last year at the Obstetrical Society I showed a specimen removed by this operation 20 years ago, and the patient was still free from recurrence. But the supravaginal amputation of the cervix is apt to be followed by troublesome contraction of the opening into the uterine cavity, and this gives rise in many cases to a rather severe form of dysmenorrhœa. So that for early cases of cervical carcinoma I have of late years relied exclusively on vaginal hysterectomy.

The third group of cases contains those in which the disease has attained a considerable degree of advancement when the case is first seen. This is shown perhaps by a very extensive excavation of the substance of the cervix and even of the lower part of the body of the uterus, as in the specimen here figured. Or there may be some slight extension of the disease outside the anatomical boundaries of the uterus; for instance, into the connective tissue of one or other broad ligament, or into the utero-sacral ligaments, or a short distance on to the vaginal walls. Again, the iliac glands may be enlarged and palpable. In all these cases vaginal hysterectomy is useless. It is for cases in this class that Wertheim's hysterectomy is indicated. The preliminary dissection of the ureters enables the operator after drawing them outwards to remove a great deal more of the parametric tissue at the sides of the cervix than is possible by a vaginal hysterectomy or even by abdominal hysterectomy, unless the ureters are separated as described. It also, in some cases, allows of the removal of infiltrated lymphatic glands. In addition, large vaginal flaps may be removed by this operation, with the advantage in many cases that as the vagina is cut across below rectangular clamps the cancerous débris is confined in a pocket formed by the vaginal flaps above the clamps. In some cases it is found that the infiltrated lymphatic glands cannot be removed owing to the growth having spread through the glands and invaded the walls of the external or internal iliac arteries and veins. Therefore it is apparent that in deciding to operate on cases in this group the operation must always in the first instance be of the nature of an exploratory laparotomy, since only in the course of the operation can it be determined whether a complete removal of the diseased parts will be possible or not. In my opinion this third group of cases comprises the largest proportion of all cases at the time when they first come under observation. It is obvious therefore how greatly the operability of cases of cancer of the cervix has been increased by the introduction of Wertheim's method of hysterectomy. By this operation an apparently complete removal of all the diseased tissues is possible in a much larger proportion of cases than before this operation was devised.

The drawbacks to the operation are not inconsiderable. It will probably be admitted by those who have performed it to be the most difficult, and also the longest, operation in gynæcological work. It is necessarily a very severe operation as regards the patient, and the mortality, when it is performed in cases where the disease is at too advanced a stage for vaginal hysterectomy to be advisable, is at present certainly high. No doubt the more advanced the case the higher the mortality. Probably as the technique of the operation becomes more familiar, and as experience enables the operator to decide what cases are too advanced even for this operation, the mortality will be reduced. The value of the operation as a therapeutic measure can only be estimated when a sufficiently large number of authentic after-histories of cases operated on becomes available. At present for cases of cancer of the cervix falling in the third group as previously defined, Wertheim's operation, in spite of its drawbacks, seems to be the only treatment offering a fair prospect of relief.

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HERNIA OF THE ILIAC COLON.[1]

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"THIS kind of hernia (of the sigmoid) has hardly had the attention it deserves, and although it is not uncommon our museums do not contain many specimens."[2] This, though written many years ago, is still apparently true. Having recently seen two cases of this condition in hospital and a third in a dissecting-room body, I shall first give a brief description of these cases and then try to explain their pathology and classify them according to the new nomenclature of the lower part of the large intestine.

CASE 1.—This patient, a man, aged 27 years, was admitted to the Royal City of Dublin Hospital on July 2nd, 1906. He had a large scrotal hernia on the left side which was only partly reducible. He said that it had been present for several years and that it had come on gradually after an injury received from falling from his car some five or six years before. At the operation, when the sac had been isolated from the structures of the cord, the contents were still irreducible; the sac was therefore opened. It was then found that it contained a loop of the large intestine which was adherent to its postero-external wall. On trying to separate this loop from the sac some slight and apparently recent adhesions were broken down until about two-thirds of the circumference of the bowel were exposed. It was then seen that the peritoneum covering the gut was reflected on to and formed the sac of the hernia; in other words, the bowel formed a large part of the postero-external wall of the sac. The anterior wall of the sac was then cut away along with the portion of the posterior wall which was below the loop of intestine, the rest of the posterior wall with the loop of bowel was reduced into the abdominal cavity, and the cut edges of the peritoneum were closed by sutures at the level of the internal abdominal ring. The operation was then completed according to Bassini's method. The loop of bowel in this case was between four and six inches long and possessed no mesentery, but was, as it were, invaginated into the sac through the posterior wall.

CASE 2.—For permission to publish this case I am indebted to my colleague Mr. Henry Moore, under whose care the patient was. The patient, a man, aged 44 years, was admitted to the hospital on June 23rd, 1907. About 24 years previously he had slipped while carrying a load of hay, had fallen, and had strained his left thigh. Some months afterwards he had noticed that the left side of the scrotum was enlarging, but he had refused surgical treatment and had for a time worn a suspensory bandage. The scrotum had remained swollen since, but had given no trouble till last Easter, when he began to suffer from dry retching in the mornings and noticed a small lump in his left groin, which enlarged downwards towards the scrotum; it became larger when he coughed. He did not remember receiving any fresh injury. The swelling gave him very severe pain whenever he stooped. At the operation the testis was found to be enlarged, retroverted, and with a well-marked varicose condition of the veins at its upper end. A small irreducible hernia was found in the inguinal canal and on opening the sac a portion of the large intestine was found to be projecting from the posterior and outer wall; it did not lie free in the sac but was only covered by the peritoneum for rather less than two-thirds of its circumference; it was found to be quite impossible to free it from the sac, the peritoneum covering it being evidently continuous with that forming the fundus and neck of the sac. The further steps of the operation were the same as in the preceding case.

CASE 3.—This case was discovered in the body of a very old man, a subject seen in the dissecting room of Trinity College, Dublin. There was a very large femoral hernia on the left side. On opening the abdomen it was found that there was a complete volvulus of the small intestine, the gut being twisted on itself in the direction of the hands of a clock from the duodeno-jejunal flexure to within two inches of the ileo cæcal valve. About three feet of the small intestine were contained in the left femoral sac, the neck of which admitted four fingers; on withdrawing the small intestine from the sac a portion of the large intestine was found in the hernia behind it. This proved to be about three inches of the iliac colon, which in this case was in the form of a long loop with an extensive mesentery. Curious to say, this portion of the intestine also presented a volvulus with the twist contra-clockwise.

On looking up the subject of hernia of this part of the

[1] A paper read at a meeting of the Anatomical Section of the Royal Academy of Medicine in Ireland.

[2] Lockwood: Morbid Anatomy, Pathology, and Treatment of Hernia, 1889, p. 144.

bowel one is struck by the small attention that has been paid to it, even in the larger and more recent treatises on surgery. It is usually dismissed by saying that hernia of the sigmoid may occur on the left side in the same way as hernia of the cæcum on the right side—i.e., it may be either congenital or acquired; in the first case it may or may not have a complete peritoneal covering and in the second case it apparently always has a complete sac. Sultan in his book on abdominal hernias speaks as follows:—

It consequently happens that the cæcum, transverse colon, and sigmoid flexure can pass into a hernial sac much more easily than the ascending and descending colons. When the portions of the large intestine which have only a partial peritoneal covering pass into a hernia, they maintain the same relations to the peritoneum—i.e., they lie partly within and partly without the hernial sac.[3]

When writing in the "International Text-book of Surgery" the author says:—

The sigmoid flexure may form the whole or a part of the contents of the sac in a left inguinal and more rarely in a left femoral hernia. Much that has been said of cæcal hernia applies also to sigmoid. The sac may be partially wanting. This variety is much rarer than the cæcal form in children, though in adults it is nearly as common.[4]

Jonathan Macready says:—

Of hernia of the sigmoid flexure two circumstances may here be noted. Firstly, this part of the bowel may form a congenital hernia on the left side just as a congenital cæcocele may occur on the right. Secondly, it has happened in rare instances that when the sigmoid flexure has entered a sac on the right side it has been subject to a volvulus which has proved fatal.[5]

He refers to two cases of this form of hernia reported by Lassus[6] and Pelletan[7] and also to a strangulated sigmoid hernia reported by Berard.[8] In Treves's System of Surgery we find the following passage:—

The sigmoid flexure, forming as it does a long free loop, may find its way into almost any hernia. It is most common in a left scrotal hernia. It occurs in femoral ruptures of the left side, and this loop of bowel has been found in both inguinal and femoral ruptures on the right side. Herniæ containing a considerable part of the sigmoid flexure are apt to become incarcerated and the protruded bowel is also prone to become adherent. A congenital hernia of the sigmoid flexure may be met with in the left inguinal region. It is produced in precisely the same way as the congenital hernia of the cæcum, the sac may be complete or incomplete, the bowel and the peritoneum with which it was connected having been simply displaced downwards into the hernial sac.[9]

Even in the "Encyclopædia and Dictionary of Medicine and Surgery" at present in process of publication the description has not advanced much further. Here we find:—

The cæcum on the right side and the sigmoid flexure on the left are occasionally present in "congenital" sacs. It has been shown that under such circumstances the visceral descent is the result of the action of the gubernaculum. Above the testis the smooth muscular fibres of the gubernaculum are continued upwards with the vessels of the testis and the vas deferens in a peritoneal fold to which Lockwood has given the name "plica vascularis." The ultimate attachment of these fibres is to the peritoneum lining the posterior abdominal wall. In these forms of hernia the unduly exaggerated action of the gubernaculum results in the dragging down bodily of the peritoneum to which the fibres are attached. There is, as it were, a sort of "landslip." The cæcum or the sigmoid flexure will then bear to the sac the same relation as to the parietal peritoneum before the descent began, for what was previously parietal peritoneum is now the sac, and the mutual relationship of viscus and serous membrane is unaltered. Traces of the gubernaculum (the "natural fleshy adhesions" of Scarpa) have been discovered in the wall of the sac.[10]

Then follows a paragraph on acquired hernia of the cæcum, but nothing about acquired hernia of the sigmoid, although elsewhere when speaking of the contents of a hernia we find it said "the large intestine, especially the sigmoid, is not infrequently found." Among French surgeons we find Jaboulay writing as follows:—

Boussi has drawn attention to the abnormal disposition of the sigmoid flexure in a complete inguinal hernia. A. Broca, in a post-mortem, found a hernia of the sigmoid flexure covering a cystocele. Chauffard observed a cancer of the sigmoid flexure adherent to the sac. Ladroitte also reports a hernia of this portion of the large intestine. Finally, Anderson,[11] in October, 1895, published three cases of inguinal hernia of the sigmoid flexure without a sac. The hernias of the sigmoid flexure show two varieties corresponding to the two different modes of arrangement of the peritoneum in its neighbourhood. Sometimes the peritoneum forms a sigmoid mesocolon, more or less developed; sometimes it passes simply in front of the sigmoid loop. This unusual arrangement was pointed out for the first time by Anderson. Sometimes, he says, the ileo-pelvic mesentery is completely wanting. Then the intestine passes through the iliac fossa behind the peritoneum, covered by it only for half or two-thirds of its circumference. In this case the sigmoid flexure presents itself at the internal orifice of the inguinal canal by its posterior surface uncovered by peritoneum, and the hernia only possesses an incomplete sac, which is present on the concave side of the intestine. More frequently it has a very definite mesentery and the hernia of the sigmoid flexure has a complete sac. The natural fleshy adhesions form there in the same way as in the cæcal hernias with a complete sac and are present in the same degrees.[12]

Now that the term "sigmoid flexure" to denote a portion of the large bowel has been given up it is necessary to reconsider the hernias which occur in this part of the intestine. Birmingham in Cunningham's "Text-book of Anatomy,"[13] describes the iliac colon as follows:—

This corresponds to the portion of the "sigmoid flexure" which lies in the iliac fossa, and it has no mesentery. It is the direct continuation of the descending colon, with which it agrees in every detail except as regards its relations. Beginning at the crest of the ilium, it passes downwards and somewhat inwards, lying in front of the iliacus muscle. A little above Poupart's ligament it turns inwards over the psoas and ends at the inner border of this muscle by dipping into the pelvis and becoming the pelvic colon. It usually measures about five or six inches in length, but it varies considerably in this respect. ..... As a rule (90 per cent. of bodies—Jonnesco) it is covered by peritoneum only on its anterior and two lateral surfaces. Occasionally (10 per cent. of cases) it is completely covered, has a short mesentery (one inch), and is slightly moveable. ..... Occasionally the iliac colon occupies a lower position than usual and runs along the deep surface of Poupart's ligament, immediately behind the anterior abdominal wall.

The pelvic colon is thus described:—

This corresponds to the portion of the "sigmoid flexure" which lies in the pelvis, together with the so-called "first part of the rectum." The pelvic colon is a large coil of intestine, which begins at the inner border of the left psoas muscle, where it is continuous with the iliac colon, and ends at the level of the third sacral vertebra by passing into the rectum proper. Between these two points it has a well-developed mesentery and forms a large and variously shaped coil, which usually lies in the cavity of the pelvis (93 per cent.). ..... In length the pelvic colon generally measures 16 or 17 inches, but it may be as short as 5 inches or as long as 35 inches.

Owing to the fact that their peritoneal relations are normally different it will at once be obvious that hernia of the iliac and pelvic colons will occur in an entirely different manner. As the pelvic colon possesses a mesentery which is frequently of considerable length it may naturally enter a hernial sac in the same way as any other portion of the intestine that is so circumstanced, though its usual position in the cavity of the pelvis will prevent it from being such a frequent content of inguinal and femoral hernias as the coils of the small intestine. Many of the recorded cases of hernia of the sigmoid flexure, and probably all of those where the sigmoid was found in a hernial sac on the right side, really belong to this class of hernia of the pelvic colon. Nothing further need be said of this form of hernia.

Hernia of the iliac colon, on the other hand, may occur in at least three distinct ways: 1. It may be drawn into or through the inguinal canal by an extra attachment of the gubernaculum testis. 2. It may be drawn down by a protrusion of the peritoneum covering it in the formation of the sac of an ordinary hernia. 3. There may be a giving way or lengthening of the supporting apparatus of this portion of the intestine and a subsequent protrusion of it by the expulsive action of the abdominal muscles and diaphragm. This classification corresponds to that of Lockwood[14] for hernia of the cæcum.

As regards the first method of formation, that by an extra attachment of the gubernaculum testis, there is no doubt that hernia of the cæcum occurs in this manner. This is beautifully illustrated in a paper by Bennett and Cunningham,[15] where sections were made of a corpse presenting this abnormality and the fibres of this muscle are shown in the plates illustrating these sections.[16] If the gubernaculum may have an extra attachment to the peritoneum on the right side in close relation to the cæcum and draws this portion of the intestine into the scrotum there is no apparent reason why a like attachment on the left side close to the iliac colon should not occur also and draw this portion of the intestine into the scrotum. In this connexion I may again quote Lockwood:—

It is well known that a serous fold, the plica vascularis, which contains the spermatic vessels, connects the testicle with the sigmoid,

[3] Sultan: Abdominal Hernia.
[4] International Text-book of Surgery, vol. ii., 1900, p. 487.
[5] Jonathan F. C. H. Macready: A Treatise on Ruptures, London, 1893, p. 108.
[6] Lassus: Méd. Opérat., vol. i., 1796, pp. 173–175.
[7] Pelletan: Clin. Chir., vol. iii., 1810, p. 345.
[8] Berard: Bulletin de la Société Anatomique, 2nd ed., 1827, p. 56.
[9] Treves: System of Surgery, 1896, vol. ii., p. 724.
[10] Encyclopædia and Dictionary of Medicine and Surgery, vol. iv., p. 207 (Wm. Green and Son).
[11] Wm. Anderson: Brit. Med. Jour., 1895, vol. ii., p. 967.
[12] Le Dentu and Delbet: Traité de Chirurgie Clinique et Opératoire, 1899, vol. vii., p. 691.
[13] Text-book of Anatomy, edited by D. J. Cunningham, first edition, p. 1034 et seq.
[14] Lockwood: Op. cit., p. 141.
[15] Bennett and Cunningham: Sectional Anatomy of Congenital Cæcal Hernia, 1888.
[16] The specimens themselves are in the Surgical Museum of Trinity College, Dublin.

flexure during fœtal life, and it is also recognised that this fold is sometimes the cause either of the retention of the testicle within the abdomen or of the passage of the intestine into the processus vaginalis to form a congenital hernia of the sigmoid flexure. I have several times seen a fold of this nature running upwards from a hernial sac to the sigmoid flexure but have not yet obtained an undoubted congenital hernia of this part of the large intestine.[17]

None of the cases reported above can be considered to belong to this congenital variety. The first two are excluded by the fact that they did not appear till adult life, and in the third case although no history could be obtained the relations of the peritoneum, as we shall afterwards see, exclude it from this division.

In the second mode of formation of a hernia of the iliac colon, by a protrusion of the peritoneum covering it in the formation of the sac of an ordinary hernia, this part of the intestine would project into the sac of the hernia only partly covered by the peritoneum in the same way as the bladder in one of the well recognised forms of hernia of this viscus. With the iliac colon in its usual position this could only occur if the sac of the hernia reached an enormous size, in which case it might cause a gradual protrusion of all the peritoneum covering the iliac fossa and so finally draw the iliac colon through the inguinal canal in the formation of the sac. But if the iliac colon is already placed low down in the iliac fossa close to the internal abdominal ring it is easy to see how in the formation of even a moderate sized hernial sac the pulling on the neighbouring peritoneum may draw this part of the intestine into the inguinal canal or even into the scrotum. According to Birmingham quoted above, the iliac colon sometimes has this low position, running along Poupart's ligament immediately behind the anterior abdominal wall. Whether this abnormally low position is due to an extra attachment of the gubernaculum testis which has drawn the iliac colon to the internal ring or not is an interesting point on which I can find no direct evidence. But it seems a possible explanation of this apparently not very rare position of the bowel, which would then correspond to that of a testicle retained in the iliac fossa just inside the internal abdominal ring. A hernia formed under these conditions, though acquired in adult life, would be largely due to a congenital cause. In this connexion it is interesting to read what Bennett and Cunningham [18] say when summing up Lockwood's paper [19] :—

> The muscular tissue of the gubernaculum extends in the mesorchium of the fœtus beyond the testicle and establishes connexions with the peritoneum on the posterior wall of the abdomen. As the testicle moves a locomotion of this peritoneum is also produced and in consequence of this "the cæcum and ileum on the right side and the sigmoid flexure on the left side attain a lower position—a circumstance upon which both Scarpa and Wrisberg have commented."

Anderson also called attention to this low position of the colon in a communication to the Anatomical Society of Great Britain and Ireland and exhibited two specimens showing this variation. His description is as follows :—

> Variations in the line of attachment of the sigmoi dmeso-colon are probably not very rare. In the past year I have met with two instances in the dissecting-room of St. Thomas's Hospital in which the curve of the iliac attachment instead of crossing towards the sacral promontory ran down nearly to the level of Poupart's ligament. ..... Were a left inguinal hernia to occur in cases of this kind there would probably be a complete sac containing colon and perhaps omentum; but there is a closely allied abnormality, hitherto seen only in the living subject during surgical operation, which permits a peculiar form of sacless hernia still undescribed in our text-books. Here the intestine, bound to the iliac fossa by a layer of peritoneum covering its front and sides, runs downwards and forwards in the course described as far as the inguinal region, but the peritoneum is reflected in such a way as to leave an uncovered portion of the gut in contact with the posterior wall of the inguinal canal. In this case, should the state of the abdominal wall permit a hernia to occur, the protruding portion of colon would be partially or wholly sacless, and the division of the superficial coverings of the tumour would at once expose the muscular wall of the gut, the peritoneum appearing only as a sort of pouch attached to the concave or abdominal aspect of the coil. Such a hernia, if wholly sacless, must almost necessarily be small; but if it be supplemented by a hernia of the pelvic coils of the sigmoid colon, it may assume large dimensions, and present an incomplete sac. At least six examples of this peculiar form of hernia have been met with.[20]

Some of these are referred to later. This form of hernia must always be of considerable size as it contains both large and small intestine and we can at once exclude the second case reported from this class, as it never reached a larger size than would be explained by the presence of the loop of large intestine which it contained. The first case, however, had a large hernia which was partly reducible and came on gradually after an accident, in which a weakening or injury of the abdominal wall in the inguinal region might very well have occurred. It may therefore, I think, with great probability be placed as belonging to this class.

The third mode of formation may be thus stated, a giving way or lengthening of the supporting apparatus of the iliac colon and subsequent protrusion of this part of the intestine by the expulsive action of the abdominal muscles. Here there are two distinct factors which may allow of the occurrence of a hernia of the iliac colon; first, this part of the intestine may possess a mesentery (as Jonnesco, quoted by Birmingham above, says, 10 per cent.), and this may originally be long enough, or it may gradually stretch until it is long enough, to allow the iliac colon to reach the internal abdominal ring (or even the femoral ring) and be extruded through it, forming a hernia in the same way as any other portion of the intestine which normally possesses a mesentery. This is, I think, the explanation of the presence of the iliac colon in the femoral sac in the third case reported. In it this portion of the gut formed a long loop with an extensive mesentery but was proved to be the iliac colon from the fact that this mesentery was attached to the iliac fossa and not to the pelvis to the inner side of the psoas as the mesentery of the pelvic colon is. Secondly, the attachment of the iliac colon may gradually loosen so that the gut slips down in the iliac fossa till it approaches the internal ring, through which it is finally extruded by the contraction of the abdominal muscles. To the hernia formed in this way the term "hernia *en glissade*" may well be given, as the gut with its partial covering of peritoneum gradually slides along the sloping wall of the iliac fossa. In these cases also it is possible that the iliac colon had originally an abnormally low attachment so that the distance it had to travel to the internal abdominal ring was more or less reduced. The second case reported above may probably be placed in this class; in it there was a history of injury several years before the onset of the hernia which may have loosened the connexions of the iliac colon which then gradually made its way down the iliac fossa and was finally herniated by the contractions of the abdominal muscles. The three cases described by Anderson must also, I think, be placed in this class; in his description of them written in 1895 he commences thus :—

> Sacless hernia of the sigmoid flexure through the left inguinal canal has not hitherto been recorded so far as I am able to trace, although both vesical and cæcal hernias have been seen in the same situation.

All the cases occurred in healthy working men between 40 and 44 years of age. Two had only been present for a few months and the other for 12 years. In two cases the hernia was oblique and entered the scrotum, in the third there was a bubonocele which was apparently direct. One case was incarcerated, the other two were reducible, but, he remarks, not with the "sudden slip" characteristic of ordinary inguinal hernia. He considered that they were due to an anatomical variation which he had seen in the dissecting-room and which he thus described :—

> The sigmoid or ilio-pelvic coil, which includes the so-called first part of the rectum, had no mesentery but ran along the iliac fossa as the descending colon runs down the loin behind the peritoneum and invested only over one-half or two-thirds of its circumference. In such a condition if the sub-peritoneal tissue which unites the gut to the iliac fossa be lax the intestine may wander and find its way through the inguinal canal into the groin or scrotum.[21]

In connexion with this question of the abnormally low position of the iliac colon Macready's remarks on the mode of formation of cæcal and sigmoid hernias may be worth quoting :—

> The presence of the cæcum or sigmoid flexure in hernial sacs of opposite sides or of the same side has thus been accounted for in three ways—either by change in position of the bowel, or by unusual length of its peritoneal attachments due to defects of development, or by a combination of these conditions produced by distension. There are still two other agencies by which the cæcum [and presumably the sigmoid] may be brought into a hernial sac. In an ordinary hernia containing part of the ileum if more of the small bowel descends it may drag the cæcum and ascending colon after it.[22] The second agency is that which produces congenital hernia of the cæcum.[23]

It will be noticed how closely this classification of Macready for hernia of the cæcum corresponds to the one given above for the iliac colon.

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[17] Lockwood: Op. cit., p. 144.

[18] Bennett and Cunningham, Op. cit., p. 18.

[19] The Morbid Anatomy and Pathology of Encysted and Infantile Hernia, Transactions of the Royal Medical and Chirurgical Society, vol. lxix.

[20] Professor W. Anderson: Proceedings of the Anatomical Society of Great Britain and Ireland, Journal of Anatomy and Physiology, vol. xxxii., new series, vol. xii., Part 1, October, 1897, pp. 9 et seq.

[21] Anderson: Op. cit., p. 968.

[22] This method, of course, can only refer to the cæcum and not to the sigmoid. But its place may be taken by our second method.

[23] Jonathan Macready: Op. cit., p. 101.

We must now consider the varying relations of the peritoneum as it covers the bowel and constitutes the sac in these various forms of hernia of the iliac colon. As this part of the intestine does not normally possess a mesentery it might be concluded naturally that the sac in these cases would not be complete; this, though true probably in the majority of instances, is certainly not correct in all classes of cases. Tuffier, as quoted by Lockwood,[24] considers that the absence of a sac in a cæcal hernia is diagnostic of its congenital origin. If by this is meant partial absence of sac it is entirely too sweeping an assertion for cæcal hernia, and certainly does not apply at all to hernia of the iliac colon. Macready speaks of the peritoneal relations of these forms of hernia as follows:—

> Scarpa's natural fleshy adhesion may be defined as that formed by the natural ligaments connecting the intestine before its descent into the scrotum, with the great sac of peritoneum in the cavity of the abdomen. These natural ligaments slide, to use the expression, along with the intestine from the cavity of the abdomen through the inguinal canal into the scrotum. It is evident that the presence of this adhesion will depend upon the depth to which the cæcum, or sigmoid flexure, has descended in the sac. It is therefore more likely to be found in large herniæ than in small, and will chiefly occur in congenital cæcal hernia and that form in which the cæcum has been dragged down by a previous enterocele.[25]

(*a*) In the case of congenital hernia of the iliac colon, where the intestine and neighbouring peritoneum are drawn down by the gubernaculum into the scrotum, they probably always retain their normal relations, the parietal peritoneum being merely converted into the hernial sac. So in this form of hernia of the iliac colon the sac is most likely to be partially absent.

(*b*) In the case of hernias formed in the second manner described above the gradual pulling on the peritoneum of the iliac fossa will draw down the iliac colon into the sac in such a way that it forms part of its posterior wall, so that here, too, the sac is partially absent. Even if this form of hernia should occur in a case where the iliac colon originally had a mesentery, the gradual pulling on the peritoneum from below would cause the left or lower layer of the iliac mesocolon to be taken up in the formation of the sac, so that when the gut finally reached the hernia it would have lost its mesentery and again the sac would be incomplete. The absence of a complete sac in this form of hernia is well shown in the first case reported.

(*c*) Where the hernia is formed in the third manner described the peritoneal relations will depend on which of the two factors mentioned is the cause. 1. Where the hernia is due to a stretching and lengthening of the peritoneal attachments of the iliac colon; here the intestine has originally a mesentery or obtains one which finally becomes long enough to allow the gut to enter a hernial sac. In this case the intestine is entirely surrounded by peritoneum and the sac is complete; in fact, this is probably the only form of hernia of the iliac colon in which there is a complete sac. I have not met with an inguinal hernia of this variety, but the third case reported is one of a femoral hernia of this kind, and the peritoneal relations would be the same for an inguinal hernia formed in this way. 2. Where, however, the other factor, a relaxation of the natural support of the iliac colon, is at work, here from the loss of its natural support the bowel gradually slips down in the iliac fossa and the intestine either has no mesentery to start with, in which case it will not acquire one, or even if it has a mesentery at the commencement of its journey it loses it during its passage, so that when it appears in the hernia it is only partially covered by peritoneum and the sac is once more incomplete. So in a true "hernia *en glissade*" of the iliac colon the sac is never complete. This is well exemplified in the second case reported and in Anderson's three cases. The final conclusion, therefore, is that in hernia of the iliac colon there is never a complete sac except in those rare cases where the bowel has a mesentery originally and is herniated in the ordinary manner like any other portion of intestine. As regards the diagnosis of this form of hernia, it is probably in most cases, if not in all, an impossibility to make a correct one before operation. However, the presence of a large irreducible hernia on the left side in a young child, specially if there is a history that the hernia was noticed at, or shortly after, birth, and has never been completely reducible, would point strongly to the probability of it being a congenital hernia of the iliac colon. In the case of an acquired hernia, however, even where the sac is incomplete, I can see no certain means of making a differential diagnosis before operation, though Berard,[26] in describing a case of strangulated inguinal hernia of this portion of the bowel, suggests that the impossibility of charging the rectum with more than some ounces of water would be a pathognomonic sign. And Jaboulay, when writing of these cases, says:—

> I have found some cases in which fæcal matter accumulated and in which I was able to establish the diagnosis by the imprint made by the pressure of my finger.[27]

The operative treatment will vary according to the condition of the sac; where this is complete it will not differ from the radical cure of any other inguinal hernia. But where the sac is incomplete the difficulties in the way of a radical operation may be great. The late Mitchell Banks wrote:—

> Of all the forms of hernia with which I am acquainted those in which what may be called a "landslip" of the cæcum takes place present the greatest obstacles to the return of the bowel and involve the greatest risk to the patient.[28]

The same is true of those cases where this "landslip" has occurred on the left side involving the iliac colon. Lockwood thus describes the operative treatment of these cases:—

> Adhesions should be divided with extreme care and instead of separating the intestine from its connexion with the sac, a portion of the hinder wall of the latter may be reduced along with the intestine and an effort may be made to secure the latter in the iliac fossa.[29]

The two main points to attend to in the operation are, first, not to interfere with the blood-supply of the loop of intestine either while trying to separate adhesions or while dissecting up the posterior wall of the sac above the loop of intestine from the surrounding tissues, for this would mean almost certain gangrene of the gut; and, secondly, an attempt should be made to stitch the cut edges of the peritoneum after the main part of the sac has been cut away and the gut and remainder of the sac together have been reduced inside the abdominal cavity. It was on these lines that operation was carried out in both the cases reported above.

Additional references.—Clouquet: Recherches sur les Causes, &c., des Hernies. Wm. Lawrence: A Treatise on Ruptures, fifth edition, 1839, p. 230 et. seq. Lockwood: Hernia, Hydrocele, and Varicocele, pp. 10, 19, and 99, 1898. Antonio Scarpa: A Treatise on Hernia, translated by Wishart, 1814, fig. 1, plate viii., also p. 211. Treves: Hernias of the Cæcum, Proceedings of the Medical Society of London, vol. x., p. 11.
Dublin.

[24] Lockwood: Op. cit., p. 139.
[25] Jonathan Macready: Op. cit., p. 104.
[26] Op. cit., p. 109.
[27] Traité de Chirurgie Clinique et Opératoire, 1899, vol. vii., p. 691.
[28] Mitchell Banks: Brit. Med. Jour., Dec. 10th, 1887, p. 1259.
[29] Lockwood: Op. cit., p. 146.

THE PATHOLOGY AND ETIOLOGY OF INTUSSUSCEPTION FROM THE STUDY OF 1000 CASES.

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(Concluded from page 633.)

II.—CLASSIFICATION AND VARIETIES OF INTUSSUSCEPTION.

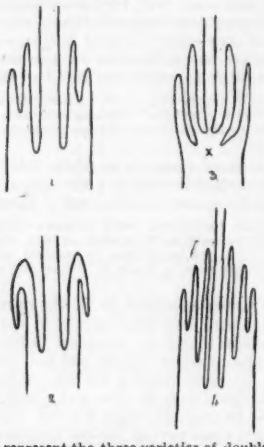
In the preceding paper I endeavoured to bring forward arguments to prove that the so-called ileo-colic variety of intussusception is nothing more than an enteric invagination which has commenced in the lower part of the ileum and passed through the valve; in this paper I deal with the classification of intussusception, the relative numbers of each variety, and give a short account of some of the rarer forms.

Double intussusceptions.—Double intussusceptions are those in which the sheath has become folded upon itself and this form presupposes a loose sheath. Double intussusceptions are almost invariably found starting in the lower end of the ileum or at the ileo-cæcal valve, as the colon in these varieties loosely envelops the small intestine. Three different varieties of double intussusceptions may be recognised according to the manner in which the sheath becomes folded.

The first variety is a fold which is seen in the sheath so as to give an appearance as if the intussusception was partially intussuscepted, both invaginations being in a downward direction. (Fig. 7, 1.)

The second variety is a fold which appears in the sheath which resembles at first sight a retrograde intussusception. The only real difference in these two varieties is that the fold in the first passes up over and in the second underneath the sheath (see Fig. 7). Many such cases, owing to a misconception of their true nature, are wrongly reported as retrograde intussusceptions. Peregrine[1] and Mr. H. W.

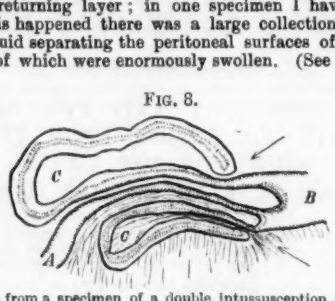
FIG. 7.



Diagrams to represent the three varieties of double intussusception. 1. First variety. 2. Second variety. 3. Third variety. x marks the site of the valve. 4 is an example of a triple intussusception.

Carson[2] each give an excellent account and drawing of an example of this variety. Occasionally the fold is very ample and completely lines the space between the sheath and the returning layer; in one specimen I have seen in which this happened there was a large collection of blood-stained fluid separating the peritoneal surfaces of the fold, portions of which were enormously swollen. (See Fig. 8.)

FIG. 8.



Sketch from a specimen of a double intussusception of the second variety with a very large fold running up under the sheath. The entrance of the fold is indicated by the arrows. The letters *A* and *B* show the upper and lower portions of the gut respectively. *C* is the space between the two layers of the fold; this on the convex side was occupied by blood-stained fluid and on the concave side by mesentery. The great thickening of the walls has been reduced for the sake of clearness.

The third variety occurs in the ileo-cæcal region where the apex of an enteric intussusception fails to pass the valve, the valve with the intussusception behind it is then invaginated into the colon. Leichtenstern described this variety under the name of iliaca-ileo-colica.

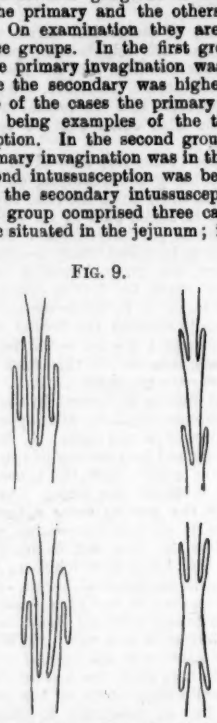
A great many examples of each of these varieties may be found scattered throughout the literature.[3]

As the complexity in the nomenclature to which I have already referred has been chiefly developed in an attempt to give descriptive names to double intussusceptions according to the portions of intestine involved I suggest that it would be far simpler if the starting-point of the invagination is named in the usual manner—ileo-cæcal, enteric, or colic—and its compound nature stated according to the variety to which it belongs.

Triple intussusceptions.—These are excessively rare. I can only find mention of two[4] such cases in the literature. Here the sheath of the primary intussusception becomes folded twice upon itself, so that there are no less than seven layers of gut surrounding the lumen of the intestine. Bucquoy[5] dissected and gave a drawing of an undoubted specimen of this condition and Mr. Watson Cheyne,[6] though he only draws attention to other interesting details, has described a case with a very similar arrangement. Both patients were males, aged 21 and 19 years respectively, both invaginations were primarily enteric, and each ran a chronic course. The former was apparently induced by the swallowing of a quantity of arsenic, while the latter was complicated by the inversion of a Meckel's diverticulum and the presence of a congenital constriction of the lumen of the gut.

Multiple intussusceptions.—Instances where two or more invaginations occur in different parts of the alimentary canal are very infrequent. In 777 cases of intussusception in which the variety and site of the invagination were noted only 12 such cases were met. I have, however, reference to three other cases.[7] Details were only given in 11 of the cases. In each case the intussusception which showed the most change either towards gangrene or irreducibility was presumed to be the primary and the others the secondary intussusceptions. On examination they are found to fall naturally into three groups. In the first group, which contains six cases, the primary invagination was in the region of the valve while the secondary was higher up the small intestine. In two of the cases the primary intussusception was double, each being examples of the third variety of double intussusception. In the second group, consisting of two cases, the primary invagination was in the region of the valve but the second intussusception was below in the large intestine; in one the secondary intussusception was retrograde. The third group comprised three cases and all the invaginations were situated in the jejunum; in two instances

FIG. 9.



Diagrams to illustrate the possible mode of formation of certain forms of double intussusception.

there were no less than four separate invaginations. They were all associated with the presence of multiple polypi. It may therefore be said that when multiple intussusceptions are present they are as a rule complicated by the presence of double intussusceptions in the lower part of the intestine or polypi in the upper part. A simple explanation may be offered for the formation of the multiple intussusceptions of Group 2 where the secondary is below the primary intussusception. It is that the invagination was at one time extensive and double. Fig. 9 shows how partial reduction of such an invagination would produce two apparently separate intussusceptions. If the double intussusception was of the first variety then the two that result on partial

[1] THE LANCET, 1873, vol. i., p. 109.
[2] THE LANCET, Oct. 6th, 1900, p. 1016.
[3] Sainet: Bulletin de la Société Anatomique, 1850, p. 314. Montard Martin; Traité Pratique des Hernies, Scarpa, p. 449.
[4] Carwardine's case seems from the description to have merely been a double one (THE LANCET, Feb. 20th, 1904, p. 505).
[5] Recueil des Travaux de la Soc. d'Observ., p. 192, Paris, 1857.
[6] Annals of Surgery, vol. xl., p. 796.
[7] Homolle, Bulletin de la Société Anatomique, 1870, p. 260 D'Arcy Power, Transactions of the Pathological Society, 1886, p. 240 Waterhouse, ibid., 1898, p. 108.

reduction would both be descending, while if of the second variety the lower of the two would be retrograde.

Intussusception of the appendix.—In exceptional cases the appendix may be inverted and apparently the primary starting-point of the intussusception, but such instances are very rare. I have only been able to collect 13 cases in which the cause was attributed to the appendix. In some no details are given, as, for instance, the case mentioned by Grieg Smith,[8] while in the cases mentioned by Wright and Renshaw,[9] Chaffey,[10] and Monsarrat[11] the appendix was not really inverted; and in Rolleston's case[12] there was only a partial prolapse of the base of the appendix owing to the presence of a concretion; no invagination of the bowel had occurred. In some of the cases which were reported as examples of this condition the symptoms had an acute onset with subsequently a chronic course, and it is quite possible that the cause of the trouble was at first an ordinary sub-acute ileo-cæcal intussusception which had undergone more or less spontaneous reduction and that the resulting dimple had corresponded to the base of the appendix. From the excellent accounts given by W. McGraw[13] and Wright and Renshaw there can, I think, be no doubt that this is the true explanation of the pathology in their cases. The instance mentioned by the two last-named writers is especially instructive, for on reduction a dimple was found in the cæcal wall, "forming a depression about the size of the first joint of an adult index finger from which the appendix sprang like the stalk of a mushroom." In the remaining six cases[14] in which the appendix was truly inverted the tendency to chronicity is marked in all and the symptoms are those of a chronic ileo-cæal intussusception. I would venture to suggest that owing to the pressure and swelling the appendix is extruded from between the inner and returning layers into the lumen of the gut, a condition of complete prolapse resulting in consequence of a *vis a tergo*. I can conceive no other way in which a tube with the small lumen and thick walls of an appendix can become turned inside out.

III.—ETIOLOGICAL AND PHYSIOLOGICAL FACTORS IN THE CAUSATION OF INTUSSUSCEPTION.

Under this heading I wish to submit figures based upon the seasonal, age, and sex incidence of intussusception which, considered in the light of our knowledge of the physiological action of the intestine, seem strongly to

FIG. 10.

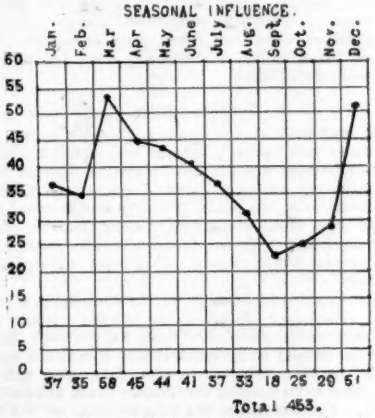


Chart showing seasonal incidence of intussusceptions in 453 cases not older than 12 months.

suggest that a dietetic factor may play a far more important part in the causation of the disease than is generally admitted to be the case.

[8] Abdominal Surgery, vol. ii., p. 678.
[9] Brit. Med. Jour., June, 1897, vol. i., p. 1470.
[10] Chaffey, quoted by McGraw, q.v.
[11] Brit. Med. Jour., December, 1900.
[12] Edinburgh Medical Journal, July, 1898.
[13] Brit. Med. Jour., vol. ii., 1897, p. 956.
[14] THE LANCET, June 12th, 1897, p. 1602; Transactions of the Pathological Society, 1898, p. 108; Edinburgh Medical Journal, 1859; THE LANCET, August 29th, 1903, p. 600; THE LANCET, Nov. 17th, 1906, p. 1345.

Seasonal Incidence.

The seasonal influence of the disease is marked and of more interest than one would expect it to be. A curve made from 453 cases not older than one year, according to the months of the year in which the intussusceptions occurred, shows a fall during the first two months and then a sudden rise in March, in which month the numbers reached their maximum; from April to September the fall is gradual and persistent, October and November each show a slight rise, while during December the curve shows that the figures nearly double those of the previous month and almost equal those of March (see Fig. 10).

The most remarkable fact about this curve is that there is a steady fall in the number of cases during those months in the summer and early autumn when the intestinal disorders of infants are most rampant. The rise during the month of December is, I think, connected with the dietary peculiar to Christmas-time, as more cases occur during the last than during the first half of the month. Easter falling either in March or April may be, I consider, closely associated with the maximum rise of the curve. At these two periods of the year the older children, and even grown-up members of the family, are accustomed to take a larger amount of sweets and indigestible foods than at other times and a misguided sense of kindness allows the infant to obtain a share of the tit-bits which are wholly unsuited to him and to which he is quite unaccustomed.

FIG. 11.

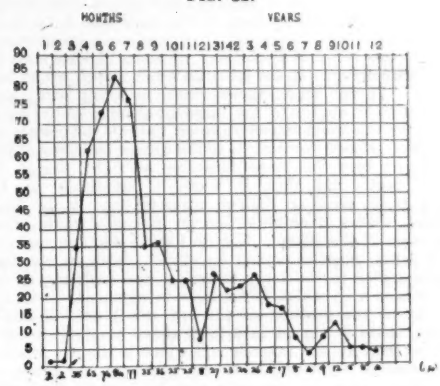


Chart showing age incidence in months and years in 648 cases under 12 years of age. The figures in the chart indicating 13 and 14 months have suffered in clearness by compression; the former should read "from 12 to 18" and the latter "from 18 to 24."

Age.

As the child's age varies, so also does his liability to suffer from intussusception. The relation of age to the incidence of the disease is remarkable and constant. In 648 cases under the age of 12 years 466, or 71·9 per cent., occurred in children who were not more than 12 months old; 143, or 20·5 per cent., between the ages of 1 and 6 years; and only 39, or 6 per cent., between 7 and 12 years of age. But we can particularise further if we look at the chart made out according to the ages in months of the cases under one year (Fig. 11). Very few cases appear before the third month. At the third month there begins an abrupt rise in the numbers, during the fourth month the figures nearly double those of the third month, and the rise continues through the fifth month to reach its zenith in the sixth month. In the seventh month the curve begins to fall and during the eighth month there is a sudden decline in the numbers and the curve becomes steadily lower towards the twelfth month. During the second year more cases are met between 12 and 18 months than between 18 and 24 months, while the numbers for the whole year more than double those of the third year, and as age proceeds the numbers, speaking generally, are found to decline.

From these figures we gather that the period between the fourth and the seventh months of life inclusive is the time at which intussusception is most likely to occur; of the 466 cases under one year no less than 64 per cent. fell within this period of four months. This monthly variation is, I believe, due directly to the ignorance on the part of those who are

responsible for the feeding of the child. The appearance of the first teeth at about the sixth month is often taken by the parents as an indication that the child is now old enough to assimilate a more varied diet than heretofore and many articles of food quite unsuited to the age are forced upon the infant. Moreover, the tedium of nursing frequently becomes irksome to the mother after the first three months and an attempt is made to relieve the strain by supplementing the natural food of the child by crusts, patent foods, or substances of an even more unsuitable nature.

Sex Influence.

In 788 cases of all ages in which the sex was noted 536, or 68 per cent., were males, while 252, or 32 per cent., were females. This disproportion between the two sexes becomes still better marked in children under 12 years of age, the ratio between males and females being as 3 is to 1. All statistics of cases of intussusception draw attention to the preponderance of the males, but as yet no explanation has been brought forward.

Mr. D'Arcy Power [15] in his Hunterian lectures stated his belief that intussusceptions at the ileo-cæcal valve would be more easily produced if the ileum sloped upwards towards the cæcum than if the ileum approached it from above downwards, as an invagination in the former case would readily pass up the ascending colon, while in the latter it would merely pass into the cæcum and no further. Thinking that the ileum in the female on account of the presence of the uterus in the pelvis might possibly slope downwards towards the valve more frequently than in the male, and so be more favourably situated to prevent invagination, I investigated this point in a series of 48 children, of whom 21 were females and 27 were males. In the girls the ileum sloped up to the cæcum in 71 per cent., sloped down in 5 per cent., and opened at right angles to the large intestine in 24 per cent. In the boys the ileum sloped upwards towards the cæcum in 52 per cent., sloped downwards to the cæcum in 11 per cent., and opened into the large intestine at right angles in 37 per cent. So that if there is anything to be learned from such a limited investigation it is that the small uterus of children has no influence whatever on the position of the ileum. Nor do I think that the position of the ileum, whether sloping up, sloping down, or opening at right angles to the large intestine, has anything to do with the ease with which it becomes invaginated, for whatever may be the position of the last few inches of small intestine there is almost invariably about one-third to one-half of an inch at the extreme end which is slightly dilated and situated at right angles to the great gut, the mode of termination which is constantly seen in some of the lower animals, as, for example, in the rabbit.

Whatever may be the explanation of the preponderance of intussusceptions in males, I cannot think that it will be found in anatomical relationships, seeing that the difference is most marked during the early years of life before any sexual difference becomes developed. I do not wish to press the point, but suggest that the sex incidence rather favours a dietetic origin of the affection; male children, being larger and stronger, are given more food than those of the opposite sex. It is a matter of interest from the point of view of the possibility of a too generous diet being responsible for the production of the condition to note that intussusceptions occur almost without exception in fat, well-developed, and healthy children. In the records of the Hospital for Sick Children there was no exception to this rule; in reading the cases in the literature one is struck by the same fact. Indeed, it has been noted by many observers and must, I think, correspond with the experience of all surgeons.

Physiological Considerations.

If we turn for a moment to consider the physiological aspects of the intestinal movements we find that the nervous mechanism which governs the movements of the intestine is situated in the wall of the gut in the plexuses of Auerbach and Meissener. The movement is the result of a true peripheral reflex and can only be influenced, but not controlled, by the central nervous system. This is the only known example in the body of a reflex which is merely peripheral. Examining the ordinary nervous mechanism of an infant we find that for all coördinated actions its central control is very imperfect. Sucking, swallowing, and crying seem to be the only well-developed actions of the newly born. All the other actions of the body have to be acquired by a gradual process of education. The functions of the bladder and rectum are quite beyond control, while the ease with which the stomach ejects its contents must be familiar to all. It is only by a long course of training that the central nervous system becomes capable of managing the various actions of the different organs. If, then, we find in the infant gross imperfections in the actions which ultimately become perfectly coördinated by the central nervous system, how much more imperfection is to be expected in the reflex management of the movement of the intestinal walls, which even in the adult is never really under the control of the brain and spinal cord. Up to the time of birth there can be little or no action in the alimentary tract; there is no call for it. After birth the intestine has to perform the double function of absorbing nutriment for the system and of passing on the undigested residue and excreta. That the latter function often is but poorly carried out is proved by the condition of constipation so commonly met with in babes and by the ease with which diarrhœa may be started.

May not the want of coördination of the intestinal movements be an important factor in the production of intussusception? I think it is. I say factor because it can only be partly the cause. If it were the sole cause it is obvious that the younger the infant and the less perfect the coördination, the more frequent would be the invaginations; but although the disease is commoner in the first than in the second six months of life, it is but rarely met before the third month. It may be that during the first three months the incoördination is so great that invagination to any great extent does not take place, or if it does occur the same want of coördination prevents its growth and brings about its dissolution. The fourth to the seventh months, during which time such a large number of cases occur, is the period when the mothers begin to augment the ordinary food, either the breast or some prepared milk, to which the intestine has become accustomed, by the addition of bread, biscuits, crusts, or the more out-of-the-way articles of diet. The coördination which we may suppose has been educated to deal with the child's ordinary diet is now upset by these strange substances. From the seventh month onwards the alimentary tract becomes more and more used to variations in the diet and better able to deal with substances which increase the intestinal movements and the numbers of intussusceptions steadily fall. From the diminution in the numbers of intussusceptions during the months when epidemic diarrhœas are at their height, I am led to suppose that the more violent forms of intestinal stimulation are so potent that any invagination which has taken place is reduced by the rapidity of the intestinal movements long before it has become really established.

Exciting Causes.

Reliable statistics of the number of cases in which an exciting cause can be assigned are very difficult to obtain. When invaginations are due to injuries or organic lesions such as tumours, enlarged glands, mesenteric bands, or Meckel's diverticula, the cause is nearly always noted in the account of the case, while for obvious reasons dietetic errors are omitted. I do not propose in this paper to refer to those causes which consist of injuries or anatomical abnormalities.

As a rule the child is brought to the hospital in a serious condition. The house surgeon elicits the main points of the history, examines the child, and finds the tumour. Interest in the smaller details of dietetics is then lost in the hurry to remedy the condition with the least possible delay, and when the notes come to be written the mother is not at hand to be questioned. For this reason the ordinary food of the infant is rarely mentioned in the notes while any recent change in the diet immediately preceding the onset of the symptoms hardly ever finds a place in the account. Sometimes the mother on understanding the serious nature of the illness, in order to absolve herself from all responsibility, denies having given the child anything but the breast and later confesses to having given the infant a crust as a treat or a grey powder on account of constipation. Out of 103 cases which occurred at the Hospital for Sick Children, Great Ormond-street, a cause was mentioned on only 34 occasions. In all cases the account of the child's history previously to the onset of this disease was very meagre, most of the notes being confined to a description of the symptoms, signs, and methods of treatment. But out of the 34 cases in which a cause was mentioned 25 were

[15] Hunterian Lectures.

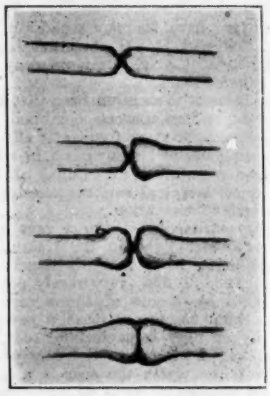
what may be termed errors of diet, and only 9 were related to mechanical causes. In Germany where breast-feeding is far more general and more strictly carried out than in this country intussusceptions in infants are relatively very rare. If statistics could be obtained from those who are well enough off to employ a reliable nurse to attend to the feeding of the infant, even if he is not fed on the breast, I am sure that the proportion of cases would be found to be far less than among the hospital class of people who, although they feed the child mainly on the breast, are too ignorant to know that pieces of steak, herrings, apples, or crusts are not suitable articles of diet for small infants. All these substances have to my knowledge been given just prior to the onset of the symptoms in children treated at the Hospital for Sick Children, Great Ormond-street.[16] I feel convinced that if the mothers were really carefully questioned on this point many would give a history of the child having had some unusual substance by the mouth, such as some indigestible form of food, an altered diet, or some purgative. The age incidence, the effect of the seasons, and, to a lesser extent, the disproportion between the sexes, all seem to point to a dietetic rather than to an anatomical causation of the disease.

Immediate Cause.

In 1884 Nothnagel[17] published the results of his experiments on intestines of animals in which he was able to produce intussusceptions and even retrograde intussusceptions by means of electrical stimuli. Since that date much progress has been made in our knowledge of the physiology of intestinal movements. Professor E. H. Starling has shown that most of the motion which used to be termed peristalsis is nothing more than a pendulum movement having no action in moving onward the intestinal contents; true peristalsis is but rarely seen except when the gut has material to drive onwards; local constrictions of a temporary nature have been described by Cannon.[18]

It was from a desire actually to see an intussusception form that I carried out experiments. I killed 25 rabbits of various ages and watched the intestinal movements in the hope of seeing a post-mortem invagination occur. Although no definite invaginations were seen nodes were observed to form which had all the appearances of small intussusceptions until they were carefully examined. (See Fig. 12.) These

FIG. 12.



Formation of nodes in a rabbit's intestine produced by stimulating by electricity.

nodes were caused by strong contractions of the circular fibres over quite a small area. Immediately below this tight constriction the intestine was relaxed and dilated, and when a peristaltic wave passed down from above it failed to pass the constriction which seemed to act as a block to the peristaltic contraction, leaving the gut above the constriction dilated. As a result there was a narrow constricted area with a dilated portion of bowel on each side. The two dilated portions sometimes overlapped and hid from view the constriction. The true nature of the node was easily demonstrated by separating the overlapping margins.

In a series of experiments on four anæsthetised rabbits electric stimuli of different strengths were applied to the various portions of the intestinal canal in the hope of producing intussusceptions as described by Nothnagel. Although the attempts were persevered in for over two hours in some of the animals no invaginations were obtained. The nodes already described were frequently formed as the result of stimulation but no method of stimulation succeeded in producing an invagination. Section of the splanchnic nerves or destruction of the cord had the effect only of increasing the frequency and amplitude of the movements. Whether or not these nodes are the small intussusceptions produced by other observers I am unable to state, but in any case they are very suggestive of the manner in which an invagination begins. A local constriction becoming overlapped by the dilated bowel below to such an extent that it can be grasped by the latter is all that is needed to initiate an intussusception.

As Cannon, by means of the x rays, has seen segmentation of the intestinal contents in cats fed on large quantities of bismuth and as these nodes are seen directly after death it is extremely probable that their formation and dissolution take place normally in the body. Possibly the formation of slight intussusceptions is not infrequent, their dissolution in the vast majority of cases being physiological, but in a small minority of cases some irritation is just sufficient to upset the coördination and the invagination becomes established. There is, I imagine, a very fine line between the limits of physiological and pathological movement in the commencement of intussusception; and the governing mechanism is so delicately balanced that there are times when the least thing, such as an undigested crust or a grain of grey powder, may be sufficient to turn a hitherto physiological process into a pathological condition fraught with the gravest danger to life.

Brook-street, W.

[16] Fitzwilliams: Essay on Intussusception, with an account and analysis of 103 cases (Thesis Ch.M. Edin.), 1907, Vol. i.
[17] Beiträge zur Physiologie und Pathologie des Darmes, p. 42, Berlin, 1884.
[18] American Journal of Physiology, 1905, p. 439; Ibid., 1906, p. 439.

SEVEN YEARS' EXPERIENCE OF THE FINSEN TREATMENT.

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INQUIRY is frequently made as to whether we at the London Hospital are satisfied with the results obtained with the Finsen treatment for lupus. In several quarters there appears to have been disappointment and the treatment has accordingly been abandoned. This is much to be regretted, because, if carried out with the attention to detail insisted upon by Finsen, phototherapy is of the highest value in lupus vulgaris. We have now had more than seven years' experience of the light treatment and in view of the doubts implied by the inquiries to which I have referred I feel that it would be convenient and perhaps of some general interest to give an account of the work done in the Light Department of the London Hospital during that period. The department was opened on May 1st, 1900, with the lamp given by Queen Alexandra (then Princess of Wales) and the review now given is of the cases treated to May 1st, 1907. During this time the installation has been increased to meet the demands. A second lamp of the original Finsen pattern was given in 1901 by Mr. Alfred Harmsworth (now Lord Northcliffe). In 1904 Mrs. Williams gave four lamps of the Finsen-Reyn pattern. The apparatus was originally in a temporary hut in the hospital garden, and in 1903 it was moved into the new out-patient block, where a commodious suite of rooms was set apart for phototherapy. The staff of attendants has also been increased from time to time and for the past four years has numbered 15. In connexion with the light department there is a room for treatment by the x rays which have been used to supplement the Finsen treatment in a certain proportion of cases. During the seven years 791 patients (218 males and 573 females) suffering from lupus vulgaris have been under the light treatment. Besides these 68 cases of lupus erythematosus and 46 cases of other disease have been treated.

In preparing the statistics which follow I have taken great

care to give a fair account of the results. From the first I have endeavoured to keep in touch with the patients after the treatment has been completed. As a rule they are seen at first once a month, and later every two or three months. Patients who live at long distances have been seen whenever possible, but where this could not be managed I have had reports from their medical advisers or direct information from the patients themselves or their friends. Of the 791 patients who attended between May 1st, 1900, and the same day in 1907 142 were still under treatment or under observation on the latter date and therefore cannot be counted as completed cases. 50 more patients ceased attending before a fair trial had been given to the treatment. In one-half of these the cause was failure of the general health. Pulmonary tuberculosis, heart disease, gastric ulcer, pernicious anæmia, and renal disease are among the conditions noted as causing a suspension of the treatment. In other instances financial or domestic conditions rendered it impossible for the patients to stay away from home for the time required. In other cases the opening of opportunities for phototherapy in their own neighbourhoods led some of our provincial patients to leave the London Hospital to be treated nearer home. Deducting these cases in which the treatment was abandoned for reasons unconnected with its efficiency, and also those under treatment and observation, we have 599 which can be fairly used for statistical purposes. To place these in a convenient form I have made several groups.

Cures (429 cases—71·6 per cent.).—I have classed as "cures" those cases in which there is a perfectly sound scar, free from nodules, and without any evidence of active disease for from over six years to one year. These patients are able to lead their ordinary lives and many of them have been rescued from permanent inability to work. To be perfectly fair I must mention that 60 of the 429 are not so sound as the rest. I have in our list labelled them Class B. In them I am led to expect that we may have from time to time to treat isolated nodules. The patients are all quite well and have been so for a long time, but they have had to be treated for small recurrences. Their reaction to tuberculosis of the skin is low. They are all able to carry on their work, they react at once to treatment, and a few sittings have removed any recurrent nodules.

Improved.—The second group of patients I call "improved." In these the disease has been of an advanced character. Many of them have had numerous operations and it is much more difficult to eradicate lupus where there has been much scarring than in those which have never been scraped. In other instances the mucous membranes have been extensively involved. These patients are not likely to get entirely well, but the improvement has been so marked that they are able to a great extent to pursue their avocation. We recognise frankly that we are unable to cure them, but the Finsen treatment cannot be called a failure as the disease has been checked. There are 107 such cases—17·8 per cent.

Failures.—In 23 cases we have had to abandon the Finsen treatment on account of (1) the great extent of the disease; (2) the rapid spread of the malady in spite of all our efforts; and (3) the extensive involvement of the mucous membranes. The very low resisting power of some of these patients is due to inheritance, to malnutrition, to unhygienic surroundings, to neglect, or to a combination of several of these conditions. We have endeavoured to raise their resisting power by change of air, by the injection of tuberculin, &c., but with no appreciable, or at most temporary, benefit. In 25 cases the Finsen treatment was abandoned entirely for other measures; some on account of their assuming an ulcerative character. Occasionally we meet with cases in which every application of the Finsen light is followed by the formation of an ulcer. I believe that these are always cases of mixed coccal and tuberculous infection. They, as a rule, respond well to the x rays. In certain extensive cases we gave up the Finsen treatment in favour of the x rays as we found that the former was unable to keep pace with the rapidly extending surface. Again, some limited cases of lupus of the extremities and trunk, where the character of the scar was immaterial, were treated by excision after the light treatment had been started. We found that we were called upon to treat so many cases of facial lupus that we felt obliged to transfer this type of case to surgical treatment. A few cases for the same reason were treated with Unna's plasters of creasote and salicylic acid.

Deaths.—15 patients have died: four from pulmonary tuberculosis, two from appendix abscess, one from heart disease, three from epithelioma secondary to the lupus, one from epithelioma of the larynx independent of the lupus, one from pneumonia, and one from "fits." In two instances we have no information as to the cause of death. It may be of interest here to note that in the patients who died from pulmonary tuberculosis the cutaneous lesions entirely disappeared before death.

Summary.

Cures (Class A, 369; Class B, 60)	429	... ...	71·6 per cent.
Improved...	107	... ...	17·8 ,,
Failures	23	... ...	3·7 ,,
Other treatment preferred	25	... ...	4·1 ,,
Deaths	15	... ...	2·8 ,,
	599		
Ceased attending	50		
Under treatment or observation on May 1st, 1907	142		
	791		

Counting the cures and the improved cases together as those in which the Finsen treatment proved beneficial the percentage is 89·4. In only 7·8 per cent. of the cases the treatment proved unsuccessful or appeared to be of less utility than other measures. This compares very favourably with the 6 per cent. of failures in Finsen's own clinic.

It must, however, be mentioned that a number of the patients were submitted at various times to the x rays as well as to the Finsen light. This has been done for the following reasons. First, the Finsen treatment cannot be applied to ulcerated areas on account of the pain produced by the compressor. All ulcerative cases, therefore, have been submitted to the x rays prior to the application of the Finsen treatment. The value of this preliminary procedure in drying up the ulcers cannot be over-estimated. Secondly, great improvement often follows the application of the x rays to extensive areas of lupus, but individual nodules are not removed except the treatment by the rays is pushed unduly. The nodules left after this preliminary treatment are individually treated by the Finsen light. Thirdly, some cases of warty lupus were found to be benefited by a preliminary x ray treatment, but in this variety we have usually applied first an ointment of pyrogallic and salicylic acids as recommended by Finsen. Fourthly, all accessible mucous membrane lesions have been treated by the x rays. Where it has been impossible to reach the mucous membrane lesions by the x rays or by light we have painted the surfaces with strong iodine solution (1 in 5) or with other caustics. Again, we have frequently had the assistance of Mr. Hunter F. Tod and Dr. H. Lambert Lack who have operated on the nasal cavity, scraping away the diseased tissue and applying caustics.

It may be of interest to mention here that 43·2 per cent. of our cases of lupus had mucous membrane lesions. The nose has, of course, been more frequently affected than any other part, but we have had many cases in which the lips, gums, and palate were involved. Lupus of the pharynx, larynx, nasal duct, lacrymal sac, conjunctiva, and tongue has also come under observation.

It is frequently claimed that the x rays are of greater value than the Finsen light in the treatment of lupus, and I should like to state here my experience of their relative value. It is, I find, very rarely possible to cure lupus of the skin by means of the x rays unless they are pushed to such an extent that a severe inflammation, followed by an ugly telangiectatic scar, results. In some ulcerative cases I have seen the cure of lupus by the x rays alone, but here again the scar is usually ugly. In the treatment of patches of lupus of moderate size, and in the future I anticipate that we shall rarely see extensive cases, the Finsen treatment holds first place. The scar is admirable and there is the least possible deformity. The treatment is expensive; the fact that each patient must have the undivided attention of a nurse throughout the sitting renders this so, but the economic value is great. As I have already mentioned a large number of the patients formerly unemployable are now able to get regular work and to keep it. The cure of early lupus in the younger patients is one of the most hopeful features. We have every reason to expect that they will never develop the destructive lesions which in the past would have rendered them a burden to the community.

Lupus erythematosus.—68 patients suffering from this disease have been treated in the period under consideration—13 males and 55 females. In 26 of these (38·24 per cent.) the Finsen treatment has proved beneficial. The

areas reacted well, and in some instances after two or three sittings complete resolution has taken place. But in every case that has been watched recurrences occurred, in some after the lapse of weeks, in others after the lapse of months. Believing as I do that lupus erythematosus is due to a circulating toxin (whether tuberculous or other it appears at present impossible to say) I do not expect that a purely local method of treatment such as that by light would do more than temporarily remove the lesions. In the majority of the cases (61·76 per cent.) the light treatment was of little or no benefit. It is difficult to say what type of case is likely to improve. My impression is that the more acute variety is the least likely to benefit, and in a few isolated cases it has appeared that the reaction has been followed by an increase in the area of the disease. This is not surprising when it is remembered that occasionally the application of a blister or of a rubefacient like mustard and the sting of an insect have been known to determine an outbreak.

Rodent ulcer.—14 cases of rodent ulcer have been treated by the Finsen light. They were all early cases and some have been cured. But there is great uncertainty as to the result, and as in this type of case the x rays are more efficient I have given up the Finsen treatment of rodent ulcer.

Cutaneous nævi.—Five cases of "port-wine stain" have been treated. In all of them there was great improvement, the lesions becoming much paler. In extensive cases, however, the treatment is so tedious that it can rarely be advised.

Moles.—A few cases of pigmented mole were treated but without success.

Leucodermia.—One case was treated but without benefit.

Alopecia.—Several cases of alopecia areata were treated, but the benefit derived from the light reaction appeared to be no greater than that following treatment by the usual stimulants, cantharides, &c.

Keloid.—The few cases of keloid which have been treated have all benefited. The lesions have become quite soft and supple. I do not, however, think that the results are more striking than those seen after x ray treatment, and the latter is applicable to larger areas and there is no inflammatory reaction as with the Finsen light.

X ray scars.—Some cases of telangiectases in x ray scars have been treated with benefit. The results have appeared better than those which have followed any other measure.

Experimental work.—The large amount of routine work inseparable from a clinic so large as that at the London Hospital has rendered it impossible to devote much time to research work. It has, however, been possible to determine that the Finsen and the Finsen-Reyn apparatus are the best at present available. Secondly, that prolonged sittings of at least one hour are essential. Thirdly, that lamps which produce a great proportion of ultra-violet rays are not on that account more valuable. Lastly, we have found that the Finsen light gives better results than measures which solely produce hyperæmia.

1. Experiments showing the superiority of the Finsen and Finsen-Reyn lamps. When M. Lortet and M. Genoud introduced their lamp we had hopes that the prolonged exposures required with Finsen's apparatus might be reduced. The advantages claimed for this apparatus are as follows. The arc is brought very near to the patient. The value of this depends upon the fact that the intensity of light varies inversely as the square of the distance from the illuminant. A less powerful arc could therefore be used, and one which could be obtained with the current available for the lighting of houses. This diminishes the cost immensely. A second point is that a much larger area can be treated at one time. The third is that an exposure of 15 minutes produces a reaction. A modification of the Lortet-Genoud lamp was made for me by Messrs. Marshall and Woods. This was rather clumsy and difficult to use and a further modification was made by Mr. Smith, then engineer to the London Hospital. We used this extensively, but experience showed that the reaction, though well-marked, was superficial. In fact, to get anything like the results obtained by the Finsen apparatus it would have been necessary to have applied the lamp for many hours. The reason is obvious, the rays from this apparatus are diverging. Mr. Smith devised a series of telescopes to place in front of his lamp to focus the light, but they have been superseded by the Finsen-Reyn apparatus which has all the advantages of the Lortet lamp. It can be worked from the ordinary street main, provided the current is continuous, or by a small transformer if the current is alternating. The telescope is much shorter than that in the original Finsen apparatus and this brings the patient nearer the source of light. But the time required to produce an adequate reaction is the same as that in the older apparatus —viz., at least one hour. From a series of comparative observations we have found that the results are identical with those obtained by the original Finsen lamp.

2. Experiments with lamps devised to produce a maximum of chemical rays. We first tried poles of iron in the Bang lamp. The electrodes are hollow and are kept cool by a current of cold water passing through them. An intense actinic light is produced. With exposures of five to ten minutes a severe superficial reaction is set up. Comparison of the results produced by the Bang lamp with those of the Finsen apparatus has led us to abandon it except in a few superficial conditions. We then tried carbon electrodes with a core of iron. These give an intense blue light but they burn very unequally and the flaring was a source of great anxiety as there was always a danger of cracking the valuable rock-crystal plates at the top of the telescopes. The reactions produced were not sufficiently deep. Several other substances were tried without advantage. The Leslie-Miller lamp was tested in a series of comparative experiments. This lamp is worked from the coil of an x ray apparatus with a large special condenser. An arc is formed between two iron poles. It is highly actinic. A pressure glass or ice compressor is used. The reaction here was found again to be too superficial. Patients were treated with this lamp and with Finsen's lamp on different parts of the same patch, and the Leslie-Miller lamp has had to give way to the original apparatus. Another trouble that we found was the noise made by the sparking between the iron electrodes. We made a few experiments with the Bastian mercury vapour lamp. This apparatus gives a very intense actinic light, but it has a great disadvantage in that the envelope of the lamp was made of glass which prevents the passage of many of the useful rays. We have recently tried the quartz lamp of Professor Kromayer. It is a mercury vapour lamp with the envelope formed of quartz, which permits the passage of the actinic rays. We have obtained intense reactions with this apparatus in some very obstinate cases of lupus. At present it has one great disadvantage. Its shape is such that it is only applicable to a small number of cases. Again, in those cases where we have obtained a very severe reaction we are not satisfied that the penetration is sufficient. It is but right to mention that we have not made many observations as yet.

3. Experiments with erythrosin. The suggestion of Dreyer that the less actinic rays might be made more active for therapeutic purposes by the sensitising of the tissues by certain chemicals was worked at. We injected into the tissue solutions of erythrosin of various strengths before applying the Finsen light. The reactions produced were intense and in some cases extensive sloughing attended with great pain was the result. The effect appeared to be exactly like that produced by active caustics. It did not seem to have any special advantages and there was the risk of troublesome healing and bad scarring.

4. Experiments with mechanical compressors. We have tried several mechanical compressors but have given them up as untrustworthy. It would be a great economy if we could dispense with the continuous attendance of the nurse. No mechanical compressor has been found to replace the nurse's fingers. It is all important that the light should be accurately focussed on the spot under treatment. I attribute the success entirely to the constant attention to this detail and there is nothing in the mechanical compressor which can assure this.

5. Ice compressors. We tried the ice compressor suggested by Dr. Hugh Walsham. The plates of ice were made from distilled water and placed on the part under treatment. The cold *plus* the compression induce the requisite anæmia of the tissues. The ice, of course, rapidly melts and fresh plates are required at frequent intervals. This means a constant change in the thickness of the compressor and the parts are kept wet. There appeared to be no advantage over the compressors in use.

6. A few experiments were made with adrenalin as suggested by Dr. Allan Jamieson. We found that it was not sufficient for the long sittings, and, moreover, it was in our large department, too expensive.

7. Experiments to determine whether the light acts solely as a means of flushing the tissue with blood. Sir Almroth

Wright's work on opsonins suggested that the reason that the light treatment is of such great value is that the inflammatory reaction floods the affected tissues with opsonins. If that were the explanation it would follow that other measures which determine the flow of blood to the part should be equally successful. Some years ago I was given the opportunity, by the courtesy of the inventor, of trying Gould's apparatus. The instrument consists essentially of an air pump to which was attached a modified cupping glass. Mr. H. Rischbieth, who was then my clinical assistant, and I made many trials with this apparatus in comparison with the Finsen lamp. We never obtained a reaction which was in any way comparable with the latter. The effect appeared to be too transitory. Since then I have used cupping-glasses for the same purpose but without obtaining any satisfactory results. Prolonged fomentation has also been tried. Dr. W. Bulloch suggested dry heat and I had several patients treated for weeks with small bags filled with hot sand. In no single instance was there any appreciable result. One more point has been tested. It was suggested that the pressure used to the affected part in the Finsen treatment was more important than the light. To determine the value of this I had several patients subjected to compression of a lupus spot with the usual compressors with no benefit or, indeed, any sign of alteration in the character of the lupus tissue.

In conclusion, I must thank my clinical assistants for their valuable coöperation and especially the sisters and nurses in the light department, to whose constant attention to the difficult details of the work the success of the treatment is due.

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A CASE OF EGG POISONING.

BY ALFRED T. SCHOFIELD, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND.

THIS case is of interest because, although egg poisoning is not extremely rare, I have been unable to find any record of cure. Jonathan Hutchinson in his "Pedigree of Disease" (1884), p. 35, speaks of eating eggs producing violent vomiting, a sense of sinking, and abdominal distress quite inexplicable, and temporary defect of sight. An artist could not see to paint after eating an egg, there being temporary suspension of the power of accommodation in both eyes, with heat of the stomach and abdominal discomfort one or two hours after breakfast. A little egg in a pudding or sauce would be sufficient to cause these symptoms, which were quite cured by abstinence from eggs. Other cases are recorded but I can find no real attempt at cure. It is possible the following account may call forth several others.

In June, 1906, I saw a boy, aged 13 years, whose parents complained that he could not eat egg in any form. He could not eat meringues nor any cake with white of egg. He had had an attack after eating bacon cooked with eggs, and the smallest piece of bread or bun with white of egg upset him. In the attack there was first of all free secretion of saliva, the lips burned, the patient felt sick, itched, and an urticarial rash shortly broke out; he swelled all over, with puffy eyelids and lips, tight, red, swollen skin, and could hardly breathe from a sort of asthmatic attack. He was found gasping in an attack after eating a small apple fritter. Never in his life had he eaten an egg. As a baby he spat out any food that contained the least trace of egg. As a child he could eat any cake free from egg, but not the smallest piece of sponge cake. He swelled up almost instantly after eating a small bun free from egg but which had been brushed over with the white of egg. Raw egg blistered his skin. He has also had attacks after eating soup cleared with white of egg, and with the smallest bit in apple sauce when not in the least suspected; so that "suggestion" played no part. He may have had some 150 attacks. He is a healthy boy generally, but has had enlarged glands, cured without operation, is of lymphatic temperament, and has some gouty eczema; the lungs and organs generally are sound and healthy.

In December, 1906, treatment was begun on the lines of establishing tolerance to this especial poison. Six weeks before, being at school he had eaten at lunch about six mouthfuls of a ginger pudding which was found to have egg in it. He felt a pricking in the tongue and throat which got better; and then in half an hour an urticarial rash came out and lasted two or three hours. There were swelling, shortness of breath and wheezing, and swollen eyes and joints. The theory of the poisoning was that the egg albumin acted in some way on the serum albumin so as to cause transudation.

The treatment consisted in the constant administration of egg with a little calcium lactate added to stop the transudation. Pills were made containing $\frac{1}{10000}$th part of a raw egg and two grains of calcium lactate each. The boy continued his usual school and home life all the time but was closely guarded against any egg in the food. He never knew there was egg in the pills. The first month (December) he took $\frac{1}{10000}$th egg daily. The next (January) this was gradually increased every four days till $\frac{1}{10000}$th of raw egg was taken daily with no symptoms. (Far less than this had previously caused symptoms.) In the month of February pills with cooked and raw egg were taken alternately, and the quantity in each pill was increased to $\frac{1}{100}$th of an egg daily, the calcium lactate being continued. In March the amount was steadily increased till $\frac{1}{10}$th was taken daily with no symptoms. In April it was raised to $\frac{1}{10}$th of an egg and in May $\frac{1}{7}$th of an egg was reached, still without symptoms, it being now quite clear that real tolerance was being established. In June it was raised to $\frac{1}{3}$rd. The patient by this time had consumed a whole egg in the six months for the first time in his life. In July the pills were dropped and the boy was given as a test some puddings and cake in which he thought there was egg but which had none and no symptoms ensued. He then had egg in his food constantly, till by the end of July he was taking $\frac{1}{2}$th of an egg daily. In July alone he ate nearly four eggs in his food. All this time he was quite well, and the amount was rapidly increased till he ate an egg a day and since has had egg in some form in food every day, and can now eat anything.

Some may think a great deal of trouble was taken to cure this idiosyncrasy, but when we remember that it was not connected with some rare food such as pineapple, which could easily be avoided, but with an article that enters into nearly all a schoolboy eats, and that his life had been more than once in danger from such food, it will be seen that the trouble taken was amply justified. The difference to the boy is, of course, enormous, and there was no sign whatever that he "would grow out of it." It would seem that with sufficient care and patience tolerance may be established in the case of most poisonous foods, and, of course, there is abundant general evidence as to this. I have ventured to record the present case because, as far as I know, it is unique, though, as I have said, I daresay this may call forth letters to prove that it is not.

Harley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

WARNING AGAINST THE INDISCRIMINATE USE OF THE OPHTHALMO-REACTION (CALMETTE) IN THE DIAGNOSIS OF TUBERCLE.

BY A. MAITLAND RAMSAY, M.D. GLASG.,
SURGEON, OPHTHALMIC INSTITUTION, AND CONSULTING OPHTHALMIC SURGEON, ROYAL INFIRMARY, GLASGOW.

THE case, that of a school-girl, 12 years of age, is reported to demonstrate that the ophthalmo-reaction (Calmette) must be used with caution and discrimination. The patient was, on Oct. 8th, 1907, admitted to the Ophthalmic Institution suffering from superficial vascular ulceration of the right cornea. There was a history of a similar attack in the left eye two years before and though careful examination revealed no sign of tubercle in the lungs or the abdomen both cervical and submaxillary glands were much enlarged. On the 10th one drop of a 1 per cent. solution of tuberculin was instilled into the left eye which was at that time perfectly free from inflammation, although there was a faint nebula on the cornea the result of the previous attack of ulceration. Within 24 hours there was violent muco-purulent reaction, the discharge being very abundant and accompanied by marked swelling of the lids and thickening of the palpebral conjunctiva. The inflammation could not be

influenced by treatment and progressed till the cornea quickly became vascular and abraded over the central area. On the 20th 0·25 cubic centimetre of a 1 in 1000 solution of Koch's old tuberculin was injected subcutaneously. This was followed by a rise in temperature and resulted in great improvement in the condition of the right eye, though the left remained unchanged. Subsequently the old tuberculin was again injected twice, the first time to the amount of 0·25 cubic centimetre and the second time to the amount of 0·5 cubic centimetre, and by the end of November the right eye was almost quite recovered, while in the left the discharge had begun to lessen. After that date the improvement in the latter was steady but there remains as a result of the Calmette instillation a considerable opacity of the centre of the cornea, and in consequence the vision is seriously impaired.

Glasgow.

NOTE ON A CASE OF POISONING BY GELSEMIUM.

BY JOHN BELL, L.R.C.P. LOND., M.R.C.S. ENG.,
SUPERINTENDENT OF THE GOVERNMENT CIVIL HOSPITAL, HONG-KONG

AS "Taylor's Medical Jurisprudence" states that this vegetable poison has never been the cause of a criminal charge the following case may be of interest to the readers of THE LANCET, more especially as the defendant's barrister, with "Taylor" in his hand, made much of this fact. The case was tried at the Criminal Sessions on Jan. 20th, 1908, before Sir Francis Piggott, C.J. The woman was found guilty and sentenced to death. The brief facts were that in consequence of a love affair having led to a disturbance she boiled some herbs and gave them to her husband as "cooling medicine" and he died shortly afterwards. The man had his food about 5.15 P.M.; the poison was administered about 6 or 6.15 P.M. The first symptoms appeared about half an hour afterwards and he died about three and a quarter hours after taking the "cooling medicine."

Mr. F. Browne, the Government analyst, identified the herbs as "gelsemium elegans" and extracted one-sixth of a grain of gelseminine from the contents of the man's stomach. The woman attempted to commit suicide but recovered. When sent to this hospital at 11.50 P.M., four hours after she had taken the poison according to her own story, she was semi-conscious, with dilated pupils insensible to light, and with slight contractions of the muscles, more especially of the upper limb. She was quite well on the next day. I inclose the police report.

[INCLOSURE.]

Western District Police Office, Jan. 21st, 1908.

Poisoning Case at No. 59, High-street.

SIR,—On the evening of Nov. 17th, 1907, Cheung Fuk was poisoned by his concubine, Lam Kiu, alias Mo Ho, at the above address. Cheung Fuk was a foreman stonecutter and contractor and was a Hakka; as probably about 90 per cent. of the stonecutters in this colony are. The concubine had a paramour and both her and the paramour also were Hakkas. At about 1 P.M. on Nov. 15th, 1907, Cheung Fuk returned home, and being about three hours earlier than usual found the paramour, Ng Nin, leaving his house after paying a visit to his concubine in his absence. He did not interfere with Ng Nin, but on entering his house he demanded an explanation from his concubine and as no explanation was forthcoming he assaulted her with an umbrella. ..... On Nov. 17th Cheung Fuk is said to have returned home at about 4 P.M. and to have gone out again until about 5 or 5.10 P.M., when he had his rice, &c., and some little time afterwards the concubine boiled some herbs as a cooling medicine for him and boiled the poisonous stems and leaves and put into the cooling medicine and gave it to him to drink. We cannot ascertain the exact time he took it, but most probably about 6 P.M. to 6.15 P.M. The concubine in her statement before the court gave the time as 7.30 P.M. when she gave him the medicine, and stated that he died at 8 P.M. A witness named Cheung Chung (who is deceased's nephew) stated "that when he visited Cheung Fuk at about 7.30 P.M. he found him rolling about on his bed in great pain and that he rolled off on to the floor, the muscles appeared to be all on the work, twitching and contracting, and the face distorted," and that he died at about 9.30 P.M. The concubine told us "that she took of the poison at about 7.50 P.M.," and when Sergeant Lenaghan entered the house at 11 P.M. "he found her rolling on the floor, she was in a dazed condition, almost unconscious, was perspiring very freely, muscles twitching, and face distorted, the eyes very full and pupils dilated."

1. Cheung Fuk's age was about 50 years.
2. The poison was given with herb tea, not with the food; he, however, had a feed of rice and congee at about 5.15 P.M.
3. Probably about half an hour after taking the poison the symptoms began.
4. As near as I can ascertain he died about three and a quarter hours from the time he took it, or two and three-quarter hours from the time the symptoms began to show.

A. CONNS, Inspector.

The Superintendent, Govt. Civil Hospital.

PS.—This poison is well known to the Hakkas ("O Mün Ting" or "Tai Cha Yeük") and is given to pigs and goats as a medicine by them. Other sections of the Chinese seldom, if ever, use it.—A.C.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Acute Suffocative Catarrh.—A Case of Acute Ulcerative Colitis with some Unusual Symptoms.

A MEETING of this section was held on Feb. 25th, Dr. S. J. GEE, the President, being in the chair.

Dr. SAMUEL WEST read a paper on Acute Suffocative Catarrh. He said that the acute suffocative catarrh of Laennec was still but little recognised—an acute catarrh of sudden onset, with suffocative dyspnœa, lasting from 24 to 48 hours. If not fatal it ran the course of an acute bronchitis. He cited a case which occurred in a young man, aged 23 years. In 24 hours from a condition of perfect health the patient passed into a state of urgent dyspnœa with considerable cyanosis and looked likely to die. Rhonchus and sibilus were the only physical signs and the temperature was raised to 101° F. In 24 hours more the urgent dyspnœa passed off. A little expectoration was then brought up and was found to contain a few pneumococci but a large number of diphtheroid bacilli of uncertain nature. The case ran a slow and tedious course towards recovery. Two other bacteriological examinations, made at intervals, showed the same bacilli. It was possible that the attack depended upon the bacilli and their wide dissemination through the bronchial tubes. The following conditions were such as were either liable to be confused with true suffocative catarrh or presented interesting relations with it: 1. Acute suffocative pulmonary œdema, or as it had been called acute non-inflammatory congestion of the lungs. Of this two instances were given with antecedent morbus cordis, one in the course of mitral disease and the other of aortic disease. It also occurred without antecedent morbus cordis, as in the course of hyperpyrexia or of malignant or septic fevers. 2. Acute inflammatory congestions. Capillary bronchitis and secondary broncho-pneumonia gave rise to little confusion. Primary broncho-pneumonia, or acute disseminated pneumococcal pneumonia, was very closely allied to suffocative catarrh. There was a form of acute pneumococcal bronchitis, and indeed suffocative catarrh might be, as the case described suggested, of pneumococcal or other bacterial origin. In the early congestive stage of acute pneumonia the dyspnœa might be urgent and the whole lung be affected. The general congestion passed off as the local lesion developed. That might be attended even with considerable hæmoptysis. 3. Collateral fluxion or pulmonary failure where one or both lungs were much taxed. The extra work might easily and rapidly pass into overwork and the failure was marked by the signs of congestion or bronchitis—a condition of gravity which if it could not be relieved at once was rapidly fatal. Pulmonary failure might arise on the opposite side in a case of pleuritic effusion or pneumothorax in both lungs in a case of abdominal distension—e.g., ascites, acute peritonitis, or tympanites, and in the other parts of the lungs in a case of acute pneumonia. Laennec's acute suffocative catarrh was a peculiar and characteristic affection and might, as the case recited suggested, be due to a widespread bacterial infection.—The PRESIDENT described how impressed he had been with the first case he had met with in his practice of acute suffocative catarrh described by Laennec, and added that it had made him very careful in expressing an opinion of the future course of any case of bronchitis at the beginning of the attack.—Dr. F. J. WETHERED narrated a case of a man who died 48 hours after the administration of ether for an operation with symptoms similar to those described by Dr. West. The question was, Was there any association between the two? In regard to Laennec's acute suffocative catarrh being due to bacterial infection, Dr. Wethered asked Dr. West to express an opinion on the case of three men who had cleaned out a filthy cesspool and who within a few hours were seized with symptoms of urgent dyspnœa and died within 24 hours.—Dr. W. EWART suggested artificial respiration in the prone position as an early treatment in cases of acute suffocative catarrh.—Dr. WEST, in reply, suggested that the explanation of the death of the patient mentioned by Dr. Wethered with acute pulmonary symptoms after the administration of

ether might have been due to fatty embolism. He also considered that bacterial infection might be assigned as a cause of the death of the three men mentioned by Dr. Wethered.

Dr. SIDNEY P. PHILLIPS read a paper on a case of Acute Ulcerative Colitis with some unusual symptoms. He said that the patient was a house painter, aged 39 years, who was seized with sudden acute pain in the abdomen, taken to be lead colic. On the next day free melæna occurred; after 48 hours of continuance of pain he gave up work and on the third day went into hospital with profuse diarrhœa, dull pain in the abdomen, very slight pyrexia, and little constitutional disturbance. On the seventh day of the illness the heart's action became very feeble and on the eighth day complete suppression of urine set in, the heart became much feebler, and the patient died on the ninth day of his illness. The diagnosis of colitis had been based on the diarrhœa, melæna, leucocytosis, and hiccough. The necropsy showed the whole length of the colon to be acutely inflamed, with almost general denudation of epithelium and with small early ulcerations; other organs were healthy. The case ran an unusually rapidly fatal course and the early cardiac failure and the anuria were notable features of the attack. The thickening of the colon wall found post mortem pointed to past attacks of colitis; possibly these were the supposed previous attacks of lead colic. But the extensive denudation of the mucous membrane of the colon with the slight superficial ulcerations were evidently of quite recent origin and probably were only set up during the few days of his fatal illness. A better opportunity was thus afforded of seeing the condition in acute ulcerative colitis than is usually possible. A somewhat similar condition of the colon was described by Wilks and Moxon in a case in which "the whole inner surface of the colon presented a bright vascular soft red surface with but a few minute points of ulceration." The symptoms in the present case were in the main those usually met with in acute ulcerative colitis; profuse melæna at the onset was not uncommon, but it was, Dr. Phillips thought, unusual to have constipation as occurred during the first two days of the case. The hiccough and the leucocytosis were useful points in the diagnosis, being, as he pointed out in a paper on Acute Colitis,[1] such constant features of the disease as to be almost characteristic. The unusual features of the illness in the case which he thought rendered it worthy of record were the early cardiac failure and complete suppression of urine which produced so rapidly a fatal issue. It appeared to him from the symptoms that the cardiac failure preceded the arrested secretion of urine. The kidneys and heart, as already noted, were found normal post mortem and he could only suppose that the cardiac and renal failure was the result of some severe toxæmia, but whether the toxins were absorbed from the alimentary canal or whether they were the toxins which set up the colitis could only be a matter of doubt. So, too, was the cause of the attack of colitis. The patient stated that he had not in any way deviated from his ordinary manner of life before he was taken ill; he had the blue line on the gums of lead workers, as was the case in another case of colitis recorded by Dr. Phillips, but it seemed very improbable that lead had anything to do with the disease. As to treatment, it was directed to controlling the diarrhœa by enemata and to free stimulation when signs of collapse came on. Operative measures, such as opening the colon, were not entertained: he did not recognise the case as one of colitis till the man had been in hospital 24 hours (the melæna that had occurred being unknown to Dr. Phillips) and by that time the patient's general condition precluded any thought of operation. Nor did Dr. Phillips think it could have been of any benefit.—Dr. W. P. HERRINGHAM said that the interest of the case lay in the problem as to the pathology of ulcerative colitis. It might be found that it was due to a special bacillus.—Dr. H. H. TOOTH said that from his experience of necropsies on cases of dysentery in South Africa he could not see any difference between ulcerative colitis and dysentery.—Dr. H. P. HAWKINS said that all the evidence that they had was tending in the direction of a bacillary origin. He described a case of ulcerative colitis which he had treated with serum prepared from Shiga's bacillus. He considered the disease was so serious that he did not hesitate to advise colotomy.—Dr. N. DALTON having spoken, Dr. F. PARKES WEBER described a case of Hirschsprung's disease (dilatation with hypertrophy of the colon) in which death occurred from ulcerative colitis.—Dr. A. M. ELLIOT said that the colon when examined post mortem in cases of dysentery presented points of similarity to the appearances seen in cases of kala-azar.—Mr. C. J. SYMONDS described two cases of ulcerative colitis in which he had tried washing out the colon from the appendix with antiseptics, with the result that not much benefit had been derived from the treatment. The question was at what stage should a colotomy be performed.—Dr. PHILLIPS, in the course of his reply, said that if ulcerative colitis was the same as dysentery then dysentery must be much more common in England at the present time than it was ten years ago. Personally he could not agree with the view that ulcerative colitis was dysentery.

[1] Brit. Med. Jour., June, 1907.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION.

Therapeutics of Diet.

A MEETING of this section was held on Feb. 25th.

Dr. HARRY CAMPBELL read a paper upon the Therapeutics of Diet. He briefly reviewed the changes which man's diet had undergone since simian times. Man's simian ancestor was mainly frugivorous (i.e., he subsisted chiefly on a concentrated vegetable diet) but he also consumed a small proportion of animal food. Man in his evolution from the ape had made three great dietetic advances. The first advance was made when he learnt to hunt and to fish, by which means he greatly increased his supply of animal food. The second advance consisted in the artificial preparation of his food. This in the first instance involved his vegetable food only. The first artificial process to which vegetable food was subjected was probably pounding or grinding, which by breaking up the coarse cellulose relieved the work of the teeth; next maceration, for the purpose of softening the cellulose and removing acrid constituents, was resorted to; and finally, cookery. There could be little doubt that the last was first employed for vegetable substances, which by its means were rendered more digestible. On the other hand, cookery had the effect of diminishing the digestibility of animal food. The third and final advance was cibiculture—i.e., the breeding of animals and the cultivation of the vegetable kingdom for purposes of food. Dr. Campbell traced the fluctuations in the relative proportion of animal and vegetable food consumed by the evolving man during the various phases of his evolution and contended that during the early hunting period he was even more carnivorous than vegetarian, and that inasmuch as man had evolved from the ape on a highly animalised diet it was idle to contend that he was by nature essentially vegetarian and that animal food was necessarily injurious to him. He drew attention to the fact that since the advent of cookery man had consumed less and less raw vegetable food and that during this time his cooked vegetable food had become increasingly soft, so much so indeed that from the dietetic standpoint the present age might be called "the age of pap." He insisted that a due proportion of vegetable food should be eaten raw and that cooked farinaceous foods should be in a form compelling abundant mastication. Were this plan adopted, not only indigestion but diseases of the teeth, nose, and throat would greatly diminish in frequency. Dr. Campbell also drew attention to the enormous increase in the consumption of sugar within recent years. He pointed out that whereas wild honey was the sole source of pure sugar for primitive man, thousands of tons of sugar were at the present time extracted yearly from sugar-cane and beetroot. He had no doubt that in England at all events far more good could be got from curtailing starch and sugar than from cutting down the animal food, though it might sometimes be necessary to do this.

Afterwards a conversazione was held at which demonstrations were given of electrical apparatus by Mr. Geoffrey Bruce and of the principles of three-colour printing by Mr. A. G. Bull. A very large number of preparations of drugs and foodstuffs and of medical apparatus and instruments was also exhibited.

DERMATOLOGICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on Feb. 20th, Dr. H. RADCLIFFE CROCKER, the President, being in the chair.

Dr. H. G. ADAMSON showed a case of Multiple Telangiectasis of the Cheek in a young girl. Many members considered this case an example of adenoma sebaceum.

Dr. WILFRID S. FOX showed a case of Lichen Planopilaris. Following upon an eruption of ordinary lichen planus, which had been treated with injections of atoxyl and had benefited rapidly with this treatment, there had appeared some spiny papules like lichen spinulosus. This sequence had been noted before.

Mr. T. J. P. HARTIGAN showed several cases of Lupus Erythematosus which had been greatly benefited by treatment with zinc and copper ions after the method recently advocated by Dr. H. Lewis Jones.

Dr. E. G. GRAHAM LITTLE showed: 1. A case of Leuconychia in a young man, all the nails of both hands being affected with this rare condition. The nails of the feet were normal. 2. A case of Lichen Annularis in an infant, in whom two typical ringed lesions on the buttocks constituted the whole eruption. 3. A case of Lymphangioma Circumscriptum, noted at birth, in a little girl now 10 months old.

Dr. J. M. H. MACLEOD showed (1) a case of Leiomyomata of the Cheek, with sections demonstrating the nature of the disease; and (2) a case of Lichen Spinulosus, with some patches resembling the eruption of lichen scrofulosorum.

Sir MALCOLM A. MORRIS showed a case of Elephantiasis Græcorum, complicated by the administration of iodides in large doses. Some of the eruption was undoubtedly due to iodism.

Dr. J. H. SEQUEIRA showed a case of Ulcerating Granuloma of the West Indies (Granuloma Inguinale Tropicum) in a man who had the typical ulcers on the groin and a very unusual fungating ulcer at the angle of the mouth.

The PRESIDENT and Mr. G. PERNET showed a case of Elephantiasis Græcorum in a woman who had been shown at the Dermatological Society of London some years previously.

Dr. ARTHUR WHITFIELD showed a case of Pseudo-pelade of Brocq, with sections demonstrating the nature of the disease.

Dr. F. PARKES WEBER showed a case of Telangiectatic Hypertrophy of the Foot which he considered as possibly of spinal origin.

Dr. A. WINKELRIED WILLIAMS showed a case of Rodent Ulcer with no raised border, which was usually regarded as distinctive of the disease.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Kala-azar.—Exhibition of Slides.

A MEETING of this society was held on Feb. 21st, Sir PATRICK MANSON, the President, being in the chair.

Fleet-Surgeon P. W. BASSETT-SMITH, R.N., said that Kala-azar was a disease of particular interest, especially when attacking Europeans. He thought the disease was more common than was usually supposed and could recall four cases which had been under treatment in his ward in which clinical evidences very strongly pointed to kala-azar, though it was only in one of the four cases that proof had been obtained; in the cases where proof was wanting they were returned as splenic anæmia. In the patient where the diagnosis was proved a small quantity of blood was drawn off from the liver during the height of a fever of an undulant character, Leishman bodies being found both singly and in groups. The patient was put on atoxyl, calcium lactate, iron, and bone marrow, and under that treatment the atoxyl being pushed to eight grains a day, the fever passed off, the patient gained weight, and epistaxis, of which complaint had been made, stopped. The marked improvement in the condition of the patient, at least for a time, under atoxyl treatment was noteworthy.

The PRESIDENT described a case of kala-azar with recovery. The patient was a man, 44 years of age, who had worked as a missionary in the neighbourhood of Calcutta. After a chronic febrile illness, lasting for over one year (September, 1903, to October, 1904), there was complete cessation of all febrile symptoms followed by restoration of weight and some, though not full, return of physical vigour. After a spell of comparatively good health for at least 15 months there was recurrence of all the symptoms in an aggravated form. There was no question about the correctness of the diagnosis, the clinical symptoms together with the microscopical findings being conclusive of kala-azar. The patient was treated with intra-muscular injections of atoxyl, the dose being gradually raised from 10 minims of a 7½ per cent. solution to 34 minims. The injections were made usually every second day, sometimes every day. The patient became exceedingly weak and he was not expected to live for more than a few weeks. From time to time, however, Sir Patrick Manson was informed of the progress of the patient and though the reports at first were not encouraging symptoms of decided improvement were finally noticed and then the weight began to show signs of increase and he began to get about. Although at the time when the patient was in such a desperate condition the atoxyl did not appear to be of much service there was the possibility that the atoxyl brought about, or conduced to, the recovery of the patient. Wishing to satisfy himself that the good accounts which he had received were well founded Sir Patrick Manson visited the patient at his home in the country in January, and the following is the description of the condition in which he found the patient: "I was gratified to find that there had been no exaggeration. The patient, who had left hospital the previous March apparently in a dying condition, was indeed practically well. He could walk at a stretch about one mile, his weight was 11 stones 1 pound (now 11 stones 3 pounds), his liver was of normal dimensions, and his spleen which, when he left hospital, had extended well to the right of the umbilicus, though still enlarged was very much reduced, the anterior border being at least three inches to the left of the umbilicus. He complained a little of various paræsthesiæ, especially in his calves, sensations of wet cold and stiffness; his knee-jerks were somewhat exaggerated and there was a suspicion of left ankle clonus. In other respects, though not vigorous, he was well and he was craving to be at work again."

Sir R. HAVELOCK CHARLES described a case of kala-azar which had been cured by sending the patient for a four months' sea voyage. Personally he did not think that any drug treatment would cure the disease. He advised change of air from the place where the disease was contracted and by that means, combined with tonics and good food, nature would cure the disease.

Colonel W. B. LEISHMAN, R.A.M.C., said he was unable to attribute recovery from kala-azar to any particular drug. In regard to a sea voyage he pointed out that soldiers with this disease returning from India necessarily had change of air and a sea voyage when they came home without being cured. The last case of kala-azar which he had to do with was treated with atoxyl but unfortunately without benefit.

Dr. G. C. LOW pointed out that it was necessary for the diagnosis of the disease to demonstrate Leishman bodies from the blood of the spleen or liver.

Dr. L. W. SAMBON drew attention to the great similarity of the parasite of kala-azar to the parasite met with in Delhi boil.

Dr. F. M. SANDWITH commented on the fact that puncturing the liver or spleen for diagnostic purposes was not unaccompanied with risk.

Fleet-Surgeon BASSETT-SMITH in the course of his reply said that in making the puncture the patient should be prevented from making any movement and should be kept in bed for some hours afterwards.

The meeting concluded with a demonstration by Dr. J. CROPPER of a number of slides showing a remarkable abundance of malarial parasites in the peripheral circulation of a fatal case of pernicious malaria.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—Cholecystitis.

A MEETING of this society was held on Feb. 27th, Mr. THOMAS H. BICKERTON, the President, being in the chair.

Dr. A. NIMMO WALKER showed a case of Tuberculosis of the Conjunctiva in a boy, aged nine years. The outer two-thirds of the conjunctiva of the lower lid of the right eye was occupied by a raised flat-topped growth, with bright-red nodular surface, which did not extend to the palpebral margin; the eye itself was unaffected. The diagnosis was confirmed by the presence of lupus on other parts of the body, from which it was probable that the eyelid had been inoculated. Dr. Walker pointed out the difference between this true tuberculous lesion and the common phlyctenular ulcer which was often called strumous or scrofulous conjunctivitis but which, in his opinion, was not due to the tubercle bacillus but was akin to eczema. He proposed to excise the

growth and to graft mucous membrane from the lips to prevent symblepharon and consequent trichiasis.—The PRESIDENT remarked upon the rarity of the condition.—Dr. G. G. STOPFORD TAYLOR suggested treating the condition by means of zinc "ions" from a solution of sulphate of zinc.—Dr. F. H. BARENDT suggested that the zinc "ions" should be used for treatment by inserting a zinc needle as the positive terminal into the conjunctiva and by this method a better result would be obtained.

Dr. J. H. ABRAM and Mr. F. T. PAUL showed, and gave particulars of, a case of Colloid Cancer of the Stomach in a boy, aged 13½ years. The patient was admitted into Dr. Abram's ward for pain in the stomach. The history was given that vomiting had begun suddenly three months previously and had continued, accompanied by loss of appetite and constipation. Nutrition was very poor. The outstanding feature of the case was the great dilatation of the stomach with visible peristalsis. A hard mass was felt lying transversely midway between the xiphisternum and the umbilicus. With diet, &c., vomiting was kept in check but the boy steadily lost weight and Mr. Paul was asked to see him. Mr. Paul opened the abdomen and found a large tumour occupying the pyloric region and spreading along the lesser curvature to the cardiac end. The tumour had been regarded as either tuberculous or other inflammatory infiltration causing obstruction but it had all the appearances of a large carcinoma. Anterior gastrostomy was performed and the boy made a good recovery with great relief to his symptoms but the relief could only be looked upon as temporary. During the course of the operation an infiltrated gland was removed and the microscopical examination of it revealed the true nature of the tumour as being colloid cancer, a condition of excessive rarity at this age.—Dr. E. E. GLYNN said that he had examined some 580 specimens of cancer from the wards and post-mortem room of the Royal Infirmary since Jan. 1st, 1900, all of which, except about 80 of the post-mortem cases, had been verified microscopically. The total number of cancer cases in persons of 30 years and under was 22. Of these seven were 25 years and under, while three were 20 years and under including Mr. Paul's case. All these were confirmed microscopically except three which were obviously cancer from the post-mortem appearances. The distribution was as follows: cancer of the breast six; of the stomach five, ages 23, 27, 28, 28, and 13 years; cancer of the rectum and sigmoid flexure four, two being colloid; of the jejunum one, cervix uteri one, epithelioma of the scalp one, testicle one, and penis one.—The case was also discussed by Mr. KEITH W. MONSARRAT and Dr. N. P. MARSH.

Dr. STOPFORD TAYLOR and Dr. R. W. MACKENNA showed several forms of Bier's Vacuum Apparatus which they had used in the practice of dermatology. Dr. Taylor said that they had used the apparatus extensively during the last few months with much advantage in cases of lupus, acne, furunculosis, various forms of œdematous eczema, and ulcers of the leg. They had found a negative pressure of 2½ pounds per square inch sufficient to produce a copious discharge of serum from callous ulcers, which is followed by the rapid formation of healthy granulations. Œdematous eczemas drained in the same way rapidly healed; and the vacuum process applied in cases of lupus, while of great value in itself, was of special efficacy when used in conjunction with the Finsen lamp. The method flushed the tissues from within and by bringing serum laden with opsonins to the seat of the disease aided phagocytosis.—The method was discussed by the PRESIDENT, Sir JAMES BARR, and Dr. J. C. M. GIVEN, and Dr. TAYLOR replied.

Mr. KEITH MONSARRAT read a paper on Cholecystitis. He expressed the view that cholecystitis should be studied not as an incident in so-called gall-stone disease but as a well-defined inflammatory visceral lesion in which infection from the intestinal canal was primarily and throughout the causative agent. The formation of gall-stones was one of the results of the infection; once formed they exerted an important influence on the gall-bladder infection, just as an appendix concretion might be responsible for a marked modification of the result of an appendicitis. Clinically there were two phases of cholecystitis which presented themselves for study, the acute attack and the interval between the attacks. Illustrations were given of the phlegmonous type of attack, of the suppurative, and of the catarrhal. The first two could be differentiated from the last by attention to the clinical signs, the importance of this differentiation being that they required operation during the attack while the last did not. The symptoms during the interval between the recurrent attacks depended upon the lesion left and varied from a condition of practical health to one of chronic invalidism. Illustrations were given, particularly of cases presenting gastric symptoms. The differential diagnosis of the acute attack and the chronic interval condition was considered and the indications for operation were discussed.—Mr. PAUL thought that Mr. Monsarrat's analogy between cholecystitis and appendicitis was quite reasonable, the essential difference being that one structure was in the direct line of infection whilst the other was a good deal removed from it. He deprecated cholecystectomy except when absolutely necessary, which was very rarely the case, and he quoted various cases illustrating the varieties of cholecystitis and the occasional difficulties experienced in diagnosis.—Mr. D. DOUGLAS CRAWFORD said that although the signs of acute cholecystitis occasionally led to a mistaken diagnosis of some other acute disease as appendicitis, yet the symptoms were so severe that an operation was undertaken. It was different, however, with the more chronic forms of infection of the biliary passages. In these cases gall-stones were almost invariably formed in the gall-bladder and might give rise to dyspeptic troubles; such cases required very careful examination, for at any time grave complications might arise, such as perforation of the gall-bladder, or a severe acute infection might be added with serious, if not fatal, results. He quoted cases illustrating his remarks.—Dr. ABRAM said he was afraid that the diagnosis of cholecystitis was not so simple as the paper would suggest. He quoted a case where just such symptoms led to operation yet the gall-bladder was found to be perfectly healthy. He agreed as to the rôle of infection in the causation of cholecystitis and gall-stones. He had met with one case of cholecystitis due to typhoid infection; the patient made a good recovery without operation. He had seen a case of gall-stones in which operation was necessary: a woman, aged 35 years, had typhoid fever at the age of 24, attacks of pain began five years later, jaundice after another year and it recurred several times. A bacteriological examination of the contents of the gall-bladder by Dr. Glynn demonstrated the presence of the bacillus typhosus.—The paper was also discussed by the PRESIDENT, Sir JAMES BARR, Dr. DAVIES, Dr. C. WILLIAMS, and Mr. W. T. THOMAS, and Mr. MONSARRAT replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Exhibition of Specimens.—Puerperal Infection.—Twin Abortion.—Labour Shock.

A MEETING of this section was held on Feb. 7th, Mr. E. H. TWEEDY, the President, being in the chair.

The PRESIDENT exhibited an Ovum from the Horn of a Bicornuate Uterus. The woman, who had borne three or four children, had had persistent hæmorrhage since January. He made a tentative diagnosis of tubal pregnancy. He operated on the following day and, to his surprise, found a small uterus with the tumour growing out from the side of it. When he split the tumour in the direction of the tube the ovum came out and it then appeared that he was dealing with a two-horned uterus. In thinking the case over he was convinced that the woman would have carried her child to full term. She had had two miscarriages and three children, and they had all, he believed, developed in that horn. The whole question of operation in a two-horned uterus was in an unsettled state. It had been asserted that if pregnancy in a two-horned uterus could be diagnosed it should be treated as if it were a tubal pregnancy; but there was no doubt that there were many women who bore children in the presence of this abnormality. The size of the tumour might have led him to a correct diagnosis; it had grown enormously in the ten days between his examinations and the operation, yet it had not burst. He had never seen a tubal pregnancy so large without rupture taking place. If it could be diagnosed that the pregnancy had taken place in the well-developed horn everyone would agree that it should be left; but the difficulty of diagnosing between the horns was very great. In the case before them the undeveloped horn was as large as a normal uterus. Nothing had come from the uterus since; and, so far as he knew, all the other full-term deliveries were normal and easy.

Sir ARTHUR V. MACAN said that he had ventured to make

a modification of Neville's forceps, on which he had a stop put so that by making a slight movement of the axis-traction handle he could tell at once without looking that the pointer was in the right direction. He described the development in the shape and mechanism of forceps, from the straight to the extra-curved German form.—Dr. SPENCER SHEILL said that the Scottish forceps had a device by which a click would tell when they were pulling, but the one shown had the advantage of the Simpson forceps without its disadvantages.

Sir ARTHUR MACAN read a paper on the Operative Treatment of Puerperal Infection, the discussion of which was postponed until the next meeting.

A paper entitled "(*a*) Twin Abortion with Double Placenta Prævia and a Remarkable Condition of the Cervix Uteri; (*b*) Labour Shock," by Professor R. J. KINKEAD of Galway, was read by Dr. G. FITZGIBBON, the acting secretary.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Liverpool on Feb. 21st, Dr. A. J. Wallace (Liverpool), the President, being in the chair.—Dr. W. Blair Bell (Liverpool) exhibited a new Portable Operating Table.—Dr. Miles H. Phillips (Sheffield) showed a specimen of the Uterus in which there was an Unusual Degree of Cystic Degeneration of the Cervix. It was removed by vaginal hysterectomy from a patient, aged 48 years, who had had one child 27 years ago. Menstruation, which had always been regular, of four days' duration every 28 days, had ceased abruptly six months ago. For the past five months there had been occasional pain in the right iliac and hypochondriac regions, but never severe. On two occasions vaginal examination had caused hæmorrhage. The cervix uteri was found to be enlarged from the presence of cystic cavities, measuring from 8 to 12 millimetres in diameter, situated chiefly in the posterior lip. They were filled with mucoid material. The cervical mucosa was normal, as was also the corpus. Microscopically the cysts were shown to be dilated cervical glands lined by a single layer of columnar epithelium. There was a great preponderance of fibrous tissue surrounding the glands and Dr. Phillips regarded the condition as due to a fibrosis of the supravaginal cervix leading to closure of some of the gland ducts and retention of their secretion comparable to involution cysts of the breast.—Dr. D. Lloyd Roberts (Manchester) recorded a case of Cæsarean Section successfully performed on a patient, aged 25 years, who was the subject of pelvic deformity due to achondroplasia. He also gave particulars of a Ruptured Ovarian Cyst occurring in a nulliparous woman, aged 52 years. At the operation evacuation in the usual way by trocar was impossible owing to the gelatinous nature of the contents. The wall of the cyst had ruptured and similar material filled the peritoneal cavity. The patient made a good recovery.—Dr. Mary H. F. Ivens (Liverpool) related a case of Pregnancy complicated by Bilateral Ovarian Dermoid Cysts occurring in a nulliparous woman, aged 35 years. Menstruation was always regular and ceased in February, 1906, and the patient sought advice five months later thinking herself to be pregnant. On examination a cystic swelling of the size of a Tangerine orange was found lying low in the pelvis beneath the pregnant uterus. On opening the abdomen the opposite ovary was found to be the seat of a similar but slightly larger tumour, also dermoid in character. It was possible to enucleate both cysts, leaving all healthy ovarian tissue behind. Recovery was uneventful and the pregnancy was uninterrupted.—Dr. T. B. Grimsdale (Liverpool) communicated a case of Carcinoma of the Cervix Uteri complicating a Three Months' Pregnancy in a patient, aged 36 years. There had been loss of flesh and a sanious discharge for three months. Abdominal hysterectomy was performed and the patient made a good recovery.—Mr. George G. Hamilton (Liverpool) showed a photograph of the specimen taken by Lumière's colour process.—Dr. E. Emrys-Roberts (Liverpool) read a short note on Cell Dehiscence in Pseudo-mucinous Cysts of the Ovary, illustrated by colour drawings. He described the epithelial lining of the cysts as being (1) typical and (2) atypical, the former being the more frequent, although both varieties were occasionally met with in the same cyst. He drew attention to the changes in the epithelial cell during the formation and extrusion of pseudo-mucin and thought it highly probable that the so-called "ovarian cells," or Drysdale's corpuscles, were really aggregations of pseudo-mucin granules and that their identification would have borne out the contention of their describer as being pathognomonic of this disease of the ovary. The process of cell dehiscence was also described as occurring especially in cysts lined by more than one layer of epithelium. In the atypical variety cell dehiscence is especially marked and represents the last stage in the life-history of the epithelial cell. The living cell is capable not only of the production but also of the extrusion of pseudo-mucin; the dead cell is filled with the substance which it cannot extrude, hence it ceases to be any longer a unicellular gland and tightly distended is shed into the lumen of the gland acinus.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 14th, Dr. J. Walker Downie, the President, being in the chair.—Dr. Arnold Lorand of Carlsbad delivered an address on the Causation and Rational Treatment of Diabetes. Diabetes, he said, developed most frequently in those addicted to a diet containing large quantities of meat and starch, especially in the children of diabetics. In such Dr. Lorand had frequently found alimentary glycosuria after puberty. A reduction in the quantity of sweets, especially if they also took much meat, was advisable as a prophylactic measure in such cases. Diabetes was caused by alterations in the various ductless glands—pancreas, thyroid, and adrenals. After giving large quantities of starchy foods the islets of Langerhans had been found to be diminished or otherwise altered. Also excessive quantities of meat were liable to cause important changes in the thyroid. It was important also to remember that in cases where post mortem no pathological changes could be made out in the pancreas, there might have been during life some defect in the internal secretion of that gland. Glycosuria or diabetes was very liable to develop in conditions associated with hyperactivity of the thyroid, in infectious diseases, after mental emotions, and in toxic states. On the other hand, glycosuria was rare in myxœdema where there was a degenerated thyroid. The injection of adrenalin had been shown to produce glycosuria when injected into animals, thus proving that the adrenals also played an important rôle in the causation of diabetes. The ovaries, testicles, and liver were also frequently altered in diabetes. The various ductless glands were closely related and any alteration in one was followed by changes in the others. The prophylactic treatment of diabetes was the most satisfactory. Diabetes often presented no clinical symptom and so was, in the early and most favourable time for treatment, frequently missed. It was therefore necessary that the urine should be examined for sugar more frequently than was usually done. A test meal containing large quantities of sweets and meat should be given and the urine examined after two hours; frequently large quantities of sugar were found after such a meal, though none was present before. Before operations such a test should be performed. Whenever the quantity of sugar had risen above 0·1 to 0·2 per cent. antidiabetic diet should be started. Dietetic treatment should always be rational and never excessively strict. Variety was a great boon. Meat should be given only once a day. Graham bread in moderate quantities was always permissible. Green vegetables, a few eggs (unless there was considerable albuminuria), kefyr or koumiss (third day), with sour cream, and one or two oranges were permissible. Also apples, peaches, or apricots could be given stewed; in this way the sugar came out in the juice which could be avoided. In severe cases, especially in young children, the diet should not be so strict. Cream and milk should be given. Diacetic acid was of more importance in these cases than the sugar. Large doses of sodium bicarbonate, say seven drachms in the day, should be given. Three ounces of carbohydrates in the day should also be given in the form of milk, or oats, or rice, or potatoes. The serum or milk of goats the thyroids of which had been extirpated Dr. Lorand had found to give excellent results in cases associated with nervous excitement and insomnia. Opium and codeia were the most useful drugs but could generally be given for only a short time.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 19th, Dr. L. W. Marshall, the President, being in the chair.—Mr. Anthony A. Bowlby gave the mid-sessional address on the Treatment of Tuberculous Disease of Bone in Children as based upon 900 cases of Hip Disease. These cases had been treated without excision and showed a mortality of less than 4 per cent., which compared with a mortality of 26 per cent. in cases treated before 1880. Mr. Bowlby pointed out that

where excision had been done the general mortality had also dropped with the introduction of antiseptic surgery from 40 per cent. to about 15 per cent. The stay of each patient in the Alexandra Hospital was unlimited and every child was taught to walk well with crutches for at least a year after all signs of active disease had disappeared. The most troublesome complications that might occur in this class of patient were disease in the other hip-joint and caries of the spine. A large percentage of the fatal cases had had the disease more than a year previously to admission and this meant a considerable lapse of time before treatment was seriously undertaken. Special stress must be laid on the importance of treating the patient quite as much as the disease, in full confidence that with time and hygienic conditions he would ultimately cure himself of the disease. Antiseptic precautions were doubly necessary in operations for abscess in such subjects, for the very reason that the patient was unable to protect himself against pyogenic organisms which found in the hip every condition favourable to their development. Very great care should also be taken to avoid infecting healthy tissues with tuberculous material. *Ceteris paribus*, the chance of complete recovery depended on the duration of the disease and the child's age when first affected with it. Of those cases which had recovered under this line of treatment it was estimated that from 5 to 10 per cent. recovered with practically no limp at all; from 30 to 40 per cent. recovered with strong useful limbs and slight shortening; another 30 to 40 per cent. recovered with more shortening but useful limbs; and about 20 per cent. or more with weak contracted limbs. The chief objection to the routine treatment by excision was that it was unnecessary for the cure of the disease. But, in addition, it was to be remembered that the operation often left much disease behind and that the lameness which ensued was much worse than that ordinarily caused by the disease. There was great need for more hospitals for the treatment of children with tuberculous disease of the bones.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 13th, Dr. Alexander Morison, the President, being in the chair.—Mr. John D. Malcolm read a paper on Uterine Hæmorrhage as a Sign of Disease. After a reference to the variability of normal menstruation in individuals in perfect health, and to Mr. Walter Heape's description of the changes taking place in the mucous membrane of the uterus during menstruation in monkeys, the various abnormal hæmorrhages were attributed: 1. To functional derangements, that is to influences outside the uterus—for example, hæmorrhages in infants; in older children associated with a precocious development of the sexual organs; hæmorrhages occasionally associated with the development of ovarian tumours before, during, and after the child-bearing period; those associated with extra-uterine fœtation and with inflammatory and non-inflammatory irritations in the ovaries and Fallopian tubes. 2. To changes in the uterine wall, the nature of which was very differently described by various writers, but all or nearly all of which were associated with an enlargement of the uterus, both in married women and in virgins. 3. To retention of products of conception and the development of moles. 4. To neoplasms. 5. To general conditions. (Hæmorrhages accompanying otherwise than normal pregnancies were excluded from consideration.) After a caution against curetting when a salpingitis existed, it was urged that a prompt and thorough investigation of all cases of abnormal hæmorrhage should be made, especially when the patient was beyond middle life. Apart from diseases fairly easily diagnosed, it was pointed out that a slightly enlarged uterus with abnormal hæmorrhages might be due to many conditions which could only be differentiated by curetting the uterus and examining the scrapings under the microscope. Constant care was necessary so that the medical man should not overlook, even for a time, a case of cancer of the uterus. The results of operative treatment were exceedingly good if the plan recommended by Wertheim was adopted in cases of cervical cancer. But to get the greatest benefit it was absolutely essential that operations should be performed early, and medical men should seize any reasonable opportunity of combating the popular fallacy that cancer of the womb was necessarily accompanied by pain and a foul discharge. Hæmorrhage was often the first and for a long time the only symptom.—A discussion then followed in which Dr. B. G. Morison and Mr. Ernest H. Shaw took part.

Reviews and Notices of Books.

The New Sydenham Society. Atlas of Clinical Medicine, Surgery, and Pathology: a Continuation of the Atlas of Pathology. Edited under the direction of the Council by JONATHAN HUTCHINSON, F.R.S., LL.D. Vol. I., comprising fasciculi xiv.–xx., 1901–1903. Vol. II., comprising fasciculi xxi.–xxvii., 1904–1907. London: The New Sydenham Society. Agents: H. K. Lewis.

THE object of this atlas, of which individual fasciculi have appeared at intervals during the last seven years, is to afford characteristic illustrations of some of the rarer or more obscure conditions of disease, with clinical histories of the cases chosen, and some general information in regard to the nature of the disease or condition illustrated. The plates have been selected with "the design to afford in as complete a manner as possible pictorial aids to diagnosis in all departments of practice."

The first volume contains illustrations of framboesial syphilis (yaws and parangi), xanthelasma and xanthoma, coxa vara, disorders in the nutrition of the skin and eruptions produced by arsenic, urticaria pigmentosa, leprosy, and herpetiform morphœa. In addition there are a considerable number of radiographs of cases of Colles's fracture and of other fractures and dislocations, together with plates showing Sprengel's shoulder, paralysis of the serratus magnus, cretinism, albinism, and some peculiar forms of syphilitic eruption. The second volume contains plates illustrative of Hebra's sarcoma melanodes, flea-bite eruptions, phtheiriasis pubis, tinea tonsurans, lichen scrofulosorum, various eruptions due to drugs (notably iodide and bromide of potassium), variola, varicella, eczema, tinea, and Darier's disease. The last fasciculus of this volume (No. XXVII.), which has been recently issued, is devoted to diseases of the Fallopian tube, ovary, uterus, and the external genitalia of the female.

From the list which has just been given it will be seen that the atlas has a very wide scope and that while some of the conditions illustrated are of considerable rarity others are of more frequent occurrence. On the whole, the former of these are likely to be the more valuable, as they should serve to afford the practitioner who has to deal with a rare case of which he has not previously seen an example some practical assistance in arriving at a diagnosis. At the same time the other plates may serve to recall to him the appearances of commoner conditions which he has not had a recent opportunity of seeing. It is impossible to refer in detail to all the subjects enumerated but it may be said that where the condition is a rare one or is of obscure nature the letterpress usually gives in very readable form an admirable summary of what is known in regard to it, together with a more or less complete clinical account of the particular case or cases given as illustrative of the condition. Some of the subjects chosen are illustrated with very numerous plates; especially we may mention the various abnormal conditions produced by arsenic, among which are included many reproductions of photographs of cases from the Manchester epidemic of arsenical neuritis.

The section on leprosy also affords examples in great numbers of the effects of that disease and this should be of especial value for reference as the disease is shown in various stages and in its different forms. The varieties and the different effects of herpetiform morphœa are also figured with some liberality. The relation of morphœa to hemiatrophy of the face is discussed and illustrated by examples in which the latter condition has followed as a sequence of morphœa of the face. The rare condition of sarcoma melanodes is carefully described and some good plates are given. Leucoderma is also represented in a considerable number of

plates and is discussed at some length. The appearances produced by this condition when it occurs in patients belonging to the coloured races are well shown. Two plates are given illustrative of myxœdema, which, however, lose by not being coloured and are therefore hardly as typical as might be desired. The plates showing various eruptions due to the bromides and iodides are also numerous and demonstrate the conditions observed very well. It is more difficult to see the necessity for large coloured illustrations of procidentia uteri and of carcinoma and syphilis of the vulva than for some of the other conditions which we have enumerated.

In general the coloured plates are accurate representations of the conditions which they depict, although in many instances they cannot be said to possess the high artistic merit of the plates of some modern atlases. The reproductions of photographs are good, although photographs of the cutaneous manifestations of disease are frequently not easy to interpret unless a thorough knowledge of the conditions described is possessed. The radiographic plates are all very satisfactory. A useful index has been added to both volumes, which renders reference to the plates and letterpress easy. The atlas would be a valuable addition to the library of the practitioner as a work of reference and as a help in the diagnosis of obscure conditions.

Surgical Applied Anatomy. By Sir FREDERICK TREVES, Bart., G.C.V.O., C.B., LL.D., F.R.C.S. Eng., Consulting Surgeon to the London Hospital. Fifth edition, revised by ARTHUR KEITH, M.D. Aberd., F.R.C.S. Eng., Lecturer on, and Senior Demonstrator of, Anatomy at the London Hospital. London: Cassell and Co., Limited. 1907. Pp. 640. Price 9*s.* net.

THE fifth edition of this excellent little book has been very carefully revised and in many places re-written by Dr. Arthur Keith but the general arrangement of the contents has not been altered in any way. Each chapter has been brought well up to date. 43 new figures have been added, 15 of the former ones have been re-drawn, and colours have been freely used to make the illustrations more effective. These alterations and additions, which without exception show the touch of a master hand, considerably increase the value of the work and together with the alterations in the text combine to make the manual of the greatest value to the senior student and practitioner. In view of the many large works on applied anatomy which are continually being published it is most refreshing to find a book of comparatively small size which contains such a wealth of anatomical details of clinical importance. We wish the book a continuance of the success which it has so deservedly gained.

A Manual of Surgery. By FRANCIS T. STEWART, M.D., Professor of Surgery, Philadelphia Polyclinic; Associate in Surgery, Jefferson Medical College; Surgeon to the Germantown Hospital; Out-patient Surgeon to the Pennsylvania Hospital. London: Rebman, Limited. 1907. Pp. 778. 504 Illustrations. Price 15*s.* net.

THIS book has been written for the express purpose of providing the student and busy practitioner with a brief and concise account of modern surgery. In order to achieve this end information has been drawn liberally from many of the most recent text-books and systems of surgery and pathology; consequently the book may be accurately described as being well up to date.

The general plan of the work is similar to that adopted in large manuals. The early chapters, devoted to diagnosis, anæsthesia, bacteriology, inflammation, tumours, and so on, are followed by a description of general and regional surgery. Those facts which the student must know, together with the most recent and approved methods of treatment, are set forth in a clear and concise manner and prominence is always given to those details which are of the greatest clinical importance. Whenever necessary the text is amplified by good illustrations, many of which are reproduced from photographs of living subjects, while in the section on fractures several skiagrams are introduced. Serum-therapy and treatment by vaccines receive notice under the diseases for which they are used; but we think that in this respect utility has been sacrificed to brevity as no mention is made of the use of vaccines for gonorrhœa, bacilluria, or staphylococcic and streptococcic infections, while the statement on p. 167 that "the dose of the new tuberculin (T.R.) is 0·002 milligramme every second day, increased gradually until 2 milligrammes is reached,' requires modification. Apart from this we have no fault to find. The book contains a vast amount of accurate information condensed into a comparatively small space, but owing to the eminently practical way in which it is written the condensation is not such as to make the reading irksome. Stripped, as it is, of all useless verbiage, it should appeal with great force to those for whom it is primarily intended. The book is well bound and clearly printed on good paper.

Précis d'Electricité Médicale. By Dr. E. CASTEX, Professor of Medical Physics at the University of Rennes; Chef du Service of Electrotherapy and Radiography at the Hotel Dieu. Paris: F. R. de Rudeval. 1907. Price 12 francs.

THIS is the second edition of Dr. Castex's work on medical electricity and is somewhat on the same lines as Guilleminot's Electricity in Medicine, a translation of which has appeared in English.

The first part devoted to instrumentation and technique is well illustrated and comprises nearly 200 pages. It appears to be well up to date and deals fully with the more modern modalities, high frequency, and the so-called Hertzian franklinisation. The second part of the work, which is devoted to electrophysiology, includes a chapter on electricity in microbiology, and the action of ozone on microorganisms. This is followed by a chapter on electrodiagnosis. The portion of the work devoted to electrotherapy is somewhat restricted, occupying less than 200 pages. The chapters are arranged according to the particular system affected. The second half of the work is devoted to radiology and contains chapters on technique, radiodiagnosis, radiotherapy and radiumtherapy. The arrangement is logical and convenient for reference except that it seems a pity to divide the chapters on electrotherapy and radiotherapy so entirely as is done in this work. It is a waste of time to look up hypertrichosis, for instance, in one portion of the book for electrolysis and in another part for epilation by the x rays.

The *précis* is on the whole a very workmanlike production, well printed, well arranged, and well indexed. The illustrations are numerous and fairly good but not very artistic. The work is a very useful addition to the text-books on medical electricity but like many of the modern works on this subject is somewhat lacking in what we most need—viz., authoritative instruction as to the exact range and efficacy of electrotherapeutic treatment in definite cases of disease.

LIBRARY TABLE.

The Operations of Surgery, intended especially for the Use of those recently Appointed on a Hospital Staff and for those Preparing for the Higher Examinations. By W. H. A. JACOBSON, M.Ch. Oxon., F.R.C.S. Eng., Consulting Surgeon, Guy's Hospital; and R. P. ROWLANDS, M.S. Lond., F.R.C.S. Eng., Assistant Surgeon and Surgeon to the Orthopædic Department, Guy's Hospital; Joint Teacher of Operative Surgery in the Medical School. Fifth edition. With 777 illustrations. Vol. I., pp. 328; Vol. II., pp. 1139. London: J. and A. Churchill. 1907. Price 42*s.* net.—In reviewing earlier

editions of this incomparable treatise we have almost exhausted the language of eulogy, so that it is difficult to find anything fresh to say in praise of this edition. In its comprehensiveness and in its thoroughness it is unapproachable; as to accuracy, it is as near perfection as can be hoped for in any human work, and one of its most valuable characteristics is to be found in the judicious expression of opinion on the relative value of the various operations described. In this edition Mr. Rowlands has made himself entirely responsible for the sections dealing with the general surgery of the abdomen, and Mr. G. Bellingham Smith has in great part rewritten the chapters dealing with operations on the ovary and uterus. In all parts of the two volumes the work of revision has been carefully performed. The result is all that can be wished and no young surgeon can have a better or a more trustworthy guide for his operative practice than acobson's "Operations of Surgery."

A Manual of Prescribing for Students and Practitioners of Medicine. By C. R. MARSHALL, M.D. Vict., Professor of Materia Medica and Therapeutics in the University of St. Andrews, Assistant Physician to the Dundee Royal Infirmary. London: J. and A. Churchill. 1908. Pp. 373. Price 5*s.* net.—This book challenges comparison with several excellent works of a similar character which have already passed through several editions and we are able to say that it can rank with the best of them as a text-book for the student and as a "refresher" for the practitioner. It aims at relating the principles which underlie the declining art of prescribing and the contents table of the book well rehearses its purpose: modes of administering medicines; conditions affecting their administration; solution; flavouring, colouring, and perfuming agents; the forms of medicines; dispensing; and incompatibility; followed by two appendices—Latin words used in prescribing, and an English-Latin vocabulary—which are useful, although we hope that the changes recently proposed in the curriculum of our secondary schools will never make this appendix a *sine quâ non* to the medical student. Dr. Marshall writes with full information of both the technical and the scientific sides of his subject. In a book where there is much to praise we commend especially the full and lucid consideration which he bestows on incompatibility, that pitfall of the student. The examples which he gives of wrong prescriptions may be studied with great profit, especially those dealing with strychnine. The few pages on the cosmetics of prescribing will well repay study. There is no reason to make medicines unnecessarily nasty, and a knowledge of a few simple expedients on the part of the prescriber will save many a needed draught from an improper destination. Even in the days when practitioners ordered pounded mummy and such like abominations they took care to distil sweet essences from their herbal gardens with which to disguise them.

First Aid to the Injured and Sick. By F. J. WARWICK, M.B. Cantab., M.R.C.S. Eng., and A. C. TUNSTALL, M.D. Edin., F.R.C.S. Edin. Fifth edition. Bristol: John Wright and Co. London: Simpkin and Co., Limited. 1908. Pp. 252. Price 2*s.* 6*d.* net.—When we reviewed the third edition of this useful little work in our issue of May 23rd, 1903, we prophesied that a fourth edition would soon be called for. The edition now before us is the fifth. We can say no more than we said before—namely, that the practical part of the book is good and the number of editions through which it has run is evidence that it has been found useful. A special word of commendation is due to the authors for reprinting the date of the first edition.

A Short Manual for Monthly Nurses. By CHARLES J. CULLINGWORTH, M.D. Durh., F.R.C.P. Lond., Consulting Obstetric Physician to St. Thomas's Hospital. Sixth edition. London: J. and A. Churchill. 1907. Pp. 125. Price 1*s.* 6*d.* net.—Since the passing of the Midwives Act there has been a liberal issue of little books to instruct the women who come under its provisions but the present work is not intended for the guidance of midwives but rather for maternity nurses. The author states in his preface that it has been separated from his book on general nursing and as the latter is out of print some of its instructions on general sick nursing have been included in this handbook. It is hardly necessary to endorse Dr. Cullingworth's teaching on the duties of the nurse in charge of the lying-in room. His book is written in simple language and is an admirable summary of what all such nurses should know and we commend it heartily to their attention. His first words contain a warning which we have often sounded: "No printed instructions in nursing can ever take the place of practical teaching and personal experience," but this book very admirably supplements the more essential part of a "monthly nurse's" training.

Practical Medicine Series. Vol. V., Obstetrics. Edited by JOSEPH B. DE LEE, A.M., M.D., Professor of Obstetrics, Northwestern University Medical School. Chicago: The Year Book Publishers. Glasgow: G. Gillies and Co. 1907 Series. Pp. 243. Price 5*s.* net.—This work on the year's progress in obstetric medicine contains a large amount of interesting information. While a number of the abstracts refer to work done by American writers yet the publications of workers in other countries receive their full share of recognition. The book is divided into four parts concerned with Pregnancy, Labour, the Puerperium, and the Newly-born Child respectively. Of special interest is the review of the technique adopted in the practice of the Chicago Lying-in Dispensary, since by these means the brilliant results of only one case of sepsis occurring in upwards of 8000 cases of labour have been attained, results which challenge comparison with those of any lying-in hospital in the world, more especially when we remember that the patients are all attended in their own homes. An interesting *résumé* is that on the present position of hebosteotomy or pubiotomy and the results which have been obtained by different operators. Pubiotomy is undoubtedly an operation with a future and the editor has therefore wisely devoted a considerable amount of space to its literature. This series of year-books should be of considerable service to workers in all the branches of medicine.

The World's Classics. The Poetical Works of Robert Browning, Vol. II.; Marlowe's Faustus and Goethe's Faust, Part I., translated by JOHN ANSTER, with an introduction by Dr. A. W. WARD, Litt.D.; The Works of Edmund Burke, Vols. IV. and V., with introductions by F. W. RAFFERTY; William Cowper's Letters, edited, with an introduction by E. V. LUCAS; Emma, by JANE AUSTEN, with an introduction by E. V. LUCAS; Reynolds's Discourses, with an introduction by AUSTIN DOBSON. London: Henry Frowde. Unto this Last and Munera Pulveris, by JOHN RUSKIN. London: George Allen. Cloth, price 1*s.* each volume.—Mr. Frowde's teeming press continues to give new birth to the giants of old, and the poetry books claim precedence amongst this latest brood of the World's Classics. We recommend any lover of letters who has lingered on the brink of Browning, deterred from venturing further by the report of his obscurity, to obtain at once the second little volume of his poems in this series. In our opinion it presents the best of his work. We need only say that the volume includes the Lyrics, the Romances, the Men and Women, and the Dramatis Personæ. All these, charmingly printed, for a shilling. The next volume holds the great English and German versions of the "Faust" legend, although the latter suffers of necessity from translation, yet it is interesting to have between the same covers the dramatic treatment of an immortal theme by the fiery Elizabethan, hardly freed from the convention of the morality plays, and that of the choicest flower of the *Stürmer und Dränger* movement that convulsed German thought at the end of the eighteenth

century. The Master of Peterhouse does full credit to his subject in a careful introduction to these two plays. The prose works include two more volumes of Burke's political and social writings, which contain the famous appeal from the new to the old Whigs, the Letter to a Noble Lord, and the addresses to the British colonists in North America amongst many other essays and speeches. Mr. E. V. Lucas edits a liberal allowance of Cowper's letters, fascinating products of what Mr. Lucas in a recent anthology has called "the gentlest art." The same *littérateur* contributes an introduction to "Emma," which he claims to be Miss Austen's best novel. Another volume of this diverse batch is devoted to Reynolds's classical discourses to the students of the Royal Academy and three letters from their great president to "The Idler" on matters of art; these are introduced by Mr. Austin Dobson who is, of course, fully at home in the eighteenth century. The last of the series is the work of another earnest art critic but contains comment on sterner matters than art, for it is a reprint under the ægis of these World's Classics of John Ruskin's impassioned outpourings on political economy that brought him into such troubled waters in the "sixties." On the soundness or otherwise of his views we are not concerned to pronounce but the book before us affords a ready means of introduction to an honest man's political convictions which, right or wrong, were always expressed in deadly earnest. The book is likely to command a ready circulation amongst that section of the proletariat of the day which is given to thinking and reading as well as to talking.

Cantor Lectures on the Theory of the Microscope. By CONRAD BECK, F.R.M.S. London: R. and J. Beck, Limited. 1908. Pp. 59. Price 1s.—These lectures, four in number, were delivered before the Royal Society of Arts in November and December, 1907, and a brief notice of the inaugural one appeared in THE LANCET of Nov. 30th, p. 1583. They were first published in the *Journal of the Society of Arts* and are now reprinted in a convenient pamphlet form with 74 illustrations which were originally shown as lantern pictures. They give an excellent summary of an extensive and intricate subject and deserve the attention of all who are interested in any department of geometrical optics. Some of the essentially practical points to which the attention of microscopists may be directed are estimation of magnifying power (p. 7), diffraction patterns and the interpretation of microscopic images (p. 32), limits of resolution (p. 40), limits of visibility (p. 41), resolution of gratings (p. 43), the best combination of eye-piece and object-glass (p. 47), and critical illumination (p. 57). Lecture IV., in particular, is full of practical suggestions.

JOURNALS AND MAGAZINES.

The Quarterly Journal of Medicine. Edited by WILLIAM OSLER, J. ROSE BRADFORD, A. E. GARROD, R. HUTCHISON, H. D. ROLLESTON, and W. HALE WHITE. Vol. I., No. 2. January, 1908. Oxford: At the Clarendon Press. London, New York, and Toronto: Henry Frowde.—The high level reached by the first number of this journal has been fully maintained in this the second number. The first paper deals with the Pathology of the Cerebro-spinal Fluid derived from lumbar puncture and is written by Dr. J. Graham Forbes. It is based on the results of the examination of the fluid obtained from 140 cases in which lumbar puncture was performed at the Hospital for Sick Children during the last three years. The recognition of the tubercle bacillus in the fluid during life is not easy but recently the proportion of successes has risen to 80 per cent. and this has been due to adopting the simple method of staining the fine lymph clot which usually forms on standing, in which the bacilli can be easily recognised without prolonged search. Of 36 cases in which the meningitis was due to the meningococcus 11 were verified post mortem, 12 made partial or complete recovery, and two were discharged with hydrocephalus, but of the 11 remaining cases the subsequent course could not be ascertained. In the severe fatal cases and in the acute stages of those who recover the fluid is often turbid and contains a heavy trace of albumin and many polymorphonuclear cells with meningococci, identified in film preparations and culture. In the less acute and in the chronic cases the fluid is usually clear, few cells are seen and few diplococci, and as a rule cultures are sterile. The pneumococcus was found in nine cases; in one of them the pneumococcus was probably a secondary infection, for at the necropsy tuberculous meningitis was found. Streptococci were found in five cases, staphylococcus aureus in one, and bacillus coli communis in one case. In 14 cases meningitis was negatived by the examination of the cerebro-spinal fluid and by the subsequent course. Dr. Forbes comes to the conclusion that in the majority of cases, both from the positive and the negative aspects, lumbar puncture provides an important means of diagnosis, but he adds that it is another matter to decide whether it should be performed purely as an aid to diagnosis apart from its possible therapeutic value. No harm resulted in any of the 140 cases collected in the paper but it would be rash to say that the operation, even if skilfully performed, is really devoid of serious consequences. Dr. C. Rolleston has been studying Various Reflexes in Scarlet Fever and he has embodied his conclusions in a paper. He finds that in many cases of scarlet fever, especially in the severe cases and in the young, the normal plantar response of flexion is temporarily replaced by extension, and in a few cases all forms of plantar reflex are abolished. The epigastric and abdominal reflexes are also often affected, especially in the more severe cases, but less frequently than the plantar reflexes. The knee-jerks were absent in only three of the cases and these were severe. Finally, derangements of the reflexes were more commonly seen in patients attacked with endocarditis than in those affected with other complications of scarlet fever. Dr. James Mackenzie has contributed a paper on the Extra-systole. He would limit the term "extra-systole" to those premature contractions of the auricle or ventricle in response to a stimulus from some other portion of the heart, but where otherwise the fundamental or sinus rhythm is maintained. He suggests that the origin of extra-systoles may be attributed to affections of the remains of the "primitive cardiac tube," for this would account satisfactorily for the three forms of extra-systole, especially when in one case two or more forms arise. The suggestion is ingenious and Dr. Mackenzie advances several reasons in support of it. Dr. A. G. Gibson has investigated a case in which Digitalis had a very marked effect on the action of the heart, and he has come to the conclusion that digitalis diminishes the conductivity of the heart substance, that it increases the excitability and rhythmicity, and in the later stages it diminishes the contractility. Dr. Gibson has also examined the heart of a man who was suffering from Stokes-Adams Disease. The auricular rhythm was 80 and the ventricular rhythm was 35. The examination of the heart after death went to show that a definite lesion of the bundle of His was present. Dr. H. Lewis Jones has a paper on Atrophy of the Hand associated with Cervical Rib. He has taken skiagrams of the cervical region in cases of atrophy of the hand and in 12 out of 14 cases well-marked cervical ribs were found. Dr. J. H. Drysdale and Dr. W. P. Herringham have described a new form of Dwarfism associated with a spatulate condition of the hands. All four limbs are shortened and proportionally and not unequally as in achondroplasia. The hands are very broad, short, and fleshy, the fingers being affected as well as the hand itself, while in achondroplasia the fingers are conical. The condition appears to result from a delay in the process of ossification. All the bones seem to suffer except the bones

of the vault of the skull. A case of Ochronosis is reported by Mr. Edgar Reid of Swansea. Professor W. Osler has contributed a section on the clinical features of the case and Dr. A. E. Garrod has written on the urine. The patient was a woman, 67 years old, and she showed well-marked darkening of the conjunctiva and of the ear cartilages. For 30 years she had had ulcers of the legs and these had been dressed with carbolic oil (1 in 20). The urine was dark before she entered the Swansea Hospital but as soon as the carbolic oil dressing was abandoned it became natural in appearance and it did not again become dark even though the carbolic oil dressing was resumed. It seems clear that this is a carboluric case of ochronosis. The reproduction of a very good drawing of the patient accompanies the paper. Dr. J. W. H. Eyre gives a *résumé* of the Present Position of our Knowledge as to the Etiology of Malta or Mediterranean Fever. It is known by many names; and we agree that the name suggested by Dr. Eyre—namely, Melitensis septicæmia—would be very suitable. It is undoubtedly due to a special micrococcus and the only doubtful point is the mode of entrance of the organism into the body. The evidence points clearly to goat's milk as the source and the most decisive is the effect of ceasing to supply goat's milk to the garrison; in 1905 some 750 cases were admitted to hospital but in nine months in 1907 only seven cases occurred. Another paper of interest is one on the Parathyroid Glands, by Dr. David Forsyth; only the first part has appeared and it deals with the function of the parathyroid glands and their relation to the thyroid gland. An account of this will be found in THE LANCET of Feb. 29th, p. 659.

New Inventions.

A NEW FORM OF PESSARY INTENDED TO BE USED IN CASES OF PROCIDENTIA UTERI.

THE accompanying illustration is that of a new form of pessary intended for cases of procidentia uteri, which, for one reason or another, are not treated by operation. The pessary has been made by Messrs. Down Brothers with great exactness according to my instructions. The necessity for this form of pessary and the cases in which its use is indicated will be best appreciated by describing the condition of the patient for whom I originally had it made for. She was a lady upwards of 80 years of age, in possession of all her faculties, but whose locomotion and general comfort gradually became greatly interfered with by the complete prolapse of the womb. She had suffered from the procidentia for 40 years. When I first saw her it was in response to an urgent message to the effect that she was supposed to be dying from hæmorrhage. On arrival the first thing noticeable was a smell or stench which at once suggested a case of cancer. The bed on which my patient lay was fouled with blood and clots, in the midst of which the womb was found. Having

cleansed the parts I was unable to discover the source of the origin of the recent hæmorrhage, though three ulcers measuring from one to two inches in length were observable on the cervix of the uterus. There were no signs of malignant disease and the history of the case since that date has entirely removed all anxiety on this score. There were three considerations which appeared to me to be essential in the management of her case: (1) to avoid the recurrence of the hæmorrhage; (2) to avoid keeping her in bed for any longer time than absolutely necessary; and (3) to discover some means by which the cause of her present illness could be removed. It was clear that whatever pessary was used it should not support the uterus by direct pressure on its surface or on the ulcers or tend to retain its discharges, whether septic or not. The pessary made for me by Messrs. Down Brothers fulfils all these conditions as, I think, a glance at the accompanying illustration will make evident. The ring fits into the vaginal fornices and supports the roof of the vagina, and enables the uterus to hang as it were within its circumference free from all pressure and all possibility of any discharge or secretions being retained. The ring, which may be hollow vulcanite of the ordinary "watch-spring" type, is held by clasps which provide for its easy renewal when necessary. The clasps constitute the free extremities of a crescentic-shaped transverse bar. The curve is sufficiently deep to enable it to arch over the cervix without impinging upon it. As there would be a difficulty in inserting a ring pessary with a rigid fixed stem, the latter has been constructed with a hinge action. This hinge is controlled by a device which permits of its being locked or released at pleasure by means of a few turns of a sheath, which, in combination with the hinged rod, forms the stem of the pessary. The pessary is supported by a waistband and four elastic understraps, as shown. The outer sheath of the metal stem is detachable, which enables easy cleaning of all parts.

The master of the Rotunda Hospital, Dublin, Mr. E. Hastings Tweedy, was good enough to examine an earlier form of this pessary and expressed his approval of it; he also very kindly made several suggestions which were acted upon when making the final instrument.

SEYMOUR STRITCH, L.R.C.P. & S. EDIN., J.P., &c.,
The Governor, The Apothecaries' Hall, Ireland.

HARTMANN'S IODISED CATGUT.

THE Sanitary Wood Wool Company, Limited, 14, Thavies Inn, Holborn-circus, has sent us some sample tubes of their Hartmann's Iodised Catgut. They mention that this is the first time that iodised catgut has been brought to the notice of surgeons in this country. Iodine is an excellent antiseptic and it has great penetrating power, so that it is very well suited for sterilising substances such as catgut which will not stand boiling. We are not told the exact method pursued in preparing the gut but as supplied it is rolled on a spool in a glass tube hermetically sealed containing a solution of iodine. Four sizes of catgut were submitted to us and they appear to be sterile. The tensile strength of the gut is very great and this is a point of much importance. We consider the method to be satisfactory and convenient.

A NEW PATTERN OF CLINICAL THERMOMETER.

THE new feature of the thermometer shown in the engraving is the scale, which does not follow either the Fahrenheit or the Centigrade graduation but has 0 at 98·4° F., the accepted estimate of the normal human temperature. The successive Fahrenheit degrees above this are numbered +1 (i.e., 99·4°), +2 (i.e., 100·4°), and so on. The degrees below 0 are called −1 (i.e., 97·4°), −2 (i.e., 96·4°), and so

on. Charts have also been prepared on this system, having the new graduation printed on the left-hand margin together with the Fahrenheit graduation on the right-hand margin, the normal 0 line being printed in red. The advantages which I claim for the instrument are that it is easy to read, easy to understand, and easy to reduce to Fahrenheit or Centigrade degrees. The thermometer can be had graduated equal to either the Fahrenheit or the Centigrade scale. The most important advantage in using the instrument is that one must always think of the temperature in relation to the normal heat of the body. Readings can be entered after a patient's name in a visiting list with such facility, e.g., +1, +2, −1, and so on. The thermometers and charts may be obtained from Messrs. Southall Brothers and Barclay, Limited, of Birmingham.

West Bromwich. N. L. USHER SOMERS.

THE LANCET.

LONDON: SATURDAY, MARCH 7, 1908.

The Physical Condition of the Army and the Nation.

WE called attention recently to the importance of a careful consideration of the reports of the medical officers of the navy and army engaged in recruiting duties as not only indicating the physique of the services but, as it were, enabling us to lay a hand on the pulse of the national health, as affected, for good or evil, by the vicissitudes of climatic, hygienic, economic, and social influences. Our views receive more than confirmation in the last annual report of the Director-General of the Army Medical Service, Sir ALFRED KEOGH, which indicates that the statistics of recruiting, if carefully compiled, contain the most valuable lessons for us all, from the Cabinet Minister through all the ranks of tax-payers down to the man who takes the shilling. It is particularly worthy of the consideration of all who are in any degree responsible for the national health to observe that the average of recruits rejected in the year 1906 as below the health standard was 329·91 per 1000; roughly speaking, nearly one-third of the men who desired to serve in the army are unable to do so on physical grounds. Nor is it flattering to Englishmen to know that the ratios of rejections are higher in England than in Scotland or Ireland. An investigation of the figures is as disquieting as these introductory remarks would lead us to expect. The ratio of recruits rejected for tubercle, 1·07 per 1000, is distinctly low and it may be added that the ratio of invalids discharged for the same cause, 1·87 per 1000, seems not excessive. These figures bear out to some extent the cheerful lesson of Dr. H. T. BULSTRODE'S recent report on sanatoriums, in which it was shown that tuberculosis is certainly on the wane among us as a nation, but it is not altogether satisfactory to learn that the prevalence of tuberculosis in the German and Austro-Hungarian armies is only half that of our forces. It seems probable that some remediable condition is operating unfavourably upon our troops in this respect, and it is suggested by those in a position to know that some of our barracks, to the antiquity and insanitary condition of which Sir ALFRED KEOGH has drawn attention, may play their part in the matter. We may try to take consolation from the fact that the French and American ratios of tuberculosis among the troops are nearly double as high as ours, but this must not allow us to lose sight of the fact that ours is much higher than it should be. We are the pioneers of preventive medicine and we should not be content to remain inferior to Germany in any respect because we are superior in the same respect to the United States. But any qualified satisfaction that we may derive from a consideration of the figures relating to tuberculosis is required if we are to face with equanimity those relating to venereal diseases. The prevalence of venereal diseases in our army is returned at a ratio of 81·8 per 1000, while the German ratio reaches only 19·8 per 1000. How far this enormous difference is due to the absence in this country of legislative supervision as regards specific diseases is perhaps impossible, without minute inquiry, to estimate, but such facts seem to demand searching investigation, not only in the interest of the army but of the health of the nation. We have previously had occasion to point out that this prevalence of venereal disease in the army is of really national importance. Under the short-service system, the number of time-expired men who every year revert to civil life is considerable, and many of these enter upon marriage immediately upon obtaining civil employment. If they have the misfortune to be tainted with infection acquired during their period of service they often entail on their wives and offspring incalculable suffering and become the parents of children whose value to the State is negligible to say the least of it. It seems almost incredible that a matter of such importance, not only to ourselves but affecting generations yet unborn, should receive so little attention, but it may be hoped that the creation of an effective army medical reserve by familiarising civil practitioners with military conditions will lead to some result. The civil medical men may be able to bring public opinion to bear upon the question in some practical manner, while the whole subject of the preventive treatment of venereal disease requires to be considered in the light of carefully collected précis of modern knowledge.

During the year 1906 the number of recruits rejected for cardiac disease is returned at the ratio of 30·74 per 1000, an increase on the ratio of the period between 1896 and 1905 of 12·59 per 1000. Among the total effective force cardiac diseases are more prevalent than in any other army. In the year 1906 the entries are reported of 561 cases of valvular disease of the heart, 1157 cases of disordered action of the heart, and 588 cases of other circulatory diseases, of which 115 cases ended fatally and 544 cases were finally discharged from the service. The necessity of rejection for entry into, or subsequent invaliding out of, the military service owing to the existence of a cardiac murmur may to a certain degree account for these extremely high ratios. It would be interesting to compare the prevalence of these diseases in, and the practice in regard to them of, foreign armies, and also, if possible, to collect data bearing on the same conditions in the civil population at about the same age. The subject is one which requires much consideration and experience. In the reports on the health of the navy for the year 1902 the matter is alluded to in the appendix by the medical officer[1] employed at the London Recruiting Headquarters. He remarks: "No subject is of greater practical interest than the growth of the heart from the 15th to the 30th year, at which period, according to QUETELET, its evolution is matured. During the first year of life the increase is about 80 per cent., between 7 and 14 years of age the annual increase is only 8 per cent., while during the development of puberty it very nearly or quite doubles itself. A rapid development of puberty is correlated with a greater cardiac development than is the case when puberty develops

[1] Fleet-Surgeon (now Deputy-Inspector-General) Thomas E. H. Williams, R.N.

slowly. The enormous importance of these changes to the individual may be gathered from the fact that at this period the heart may, in one year, grow three times as much as it did in the preceding." It seems not only possible, but most probable, that in individuals where this rapid development has taken place for some time a weakness of the whole cardiac muscle may be the result and slight dilatation may be the effect of any unusual strain. Deputy-Inspector-General WILLIAMS in the same report points out that no medical officer can carefully examine any large number of youths without being struck with the existence, in many instances, of a definite train of symptoms, which he describes as consisting of palpitation frequently accompanied with murmurs, an abnormally diffused cardiac impulse, with slight epigastric pulsation, prolongation of the first heart sound at the apex, and accentuation of the second sound over the pulmonary area, while the first sound is weaker over the aortic area. Deputy-Inspector-General WILLIAMS attributes these symptoms in a number of cases to rapid growth of the subjects, valvular incompetency of the heart being thus produced without any deformity of the valves, and in his interesting report gives his reasons for coming to the conclusion that the condition, as long as it remains slight, naturally tends to repair, prolonged rest being the only treatment of the least practical value. The whole subject is far too intricate and difficult a one to be discussed in any conclusive way in a leading article, but we must point out that it is to these cardiac cases that the pessimistic believers in the decay of our race have most right to point. Tuberculosis appears to be yielding to a wider appreciation by the nation of its origin and methods of spread; venereal disease is capable of prevention and is as likely to attack the sound man as the weakling; but an undue number of breakdowns among youths which can be attributed merely to exertion is a disquieting matter. It is a matter that we ought to know much more about.

Taking into consideration that the standard of vision required of the military recruit is not very high—viz., a quarter of normal acuteness in each eye, or $\frac{6}{9}$ vision in one eye, provided the vision in the other eye is normal—the ratio of rejections, 28·46 per 1000, seems large. It would be interesting if in future reports the relative frequency of rejections for impaired vision as regards urban and rural districts were contrasted. Here, again, as in the matter of venereal disease and cardiac disease, we require more systematised knowledge. These are subjects on which an increased and a selected knowledge should be of advantage to the army, to the nation, to the world, "*urbi et orbi*." We have often wondered whether it would not be possible that a civil and military medical attaché should be appointed to every great foreign power. Perhaps should the kingdom of Utopia be ever evolved this may come to pass and the health of nations be deemed of equal importance to their wealth and armed forces. At any rate it is certain that a constant and careful comparison of the causes and co-relations of diseased and valetudinarian conditions cannot fail to be of service in suggesting precautions for the prevention and diminution of physical evils, some of which seem to be the concomitants, if not the actual offspring, of every advanced civilisation, the happiness of which they often so diminish and destroy.

Proposed New Hospital for Mental Diseases.

As we have already announced, a munificent offer of £30,000 has been made by Dr. HENRY MAUDSLEY to the London County Council towards a proposed scheme for the establishment in London of a fitly equipped hospital for mental diseases. Dr. MAUDSLEY has done a great deal by his writings for the advancement of the study of psychiatry, and if the scheme that he has now promulgated is carried out in the same spirit in which it has been conceived this new hospital ought to bring about a fresh era in psychological medicine. In his letter to Mr. HARRIS, the chairman of the London County Council, Dr. MAUDSLEY definitely states what the aims of the suggested hospital should be—namely, (1) the early treatment of cases of acute mental disorder, with the view, so far as possible, to prevent the necessity of sending them to the county asylums; (2) to promote exact scientific research into the causes and pathology of insanity, with the hope that much may yet be done for its prevention and successful treatment; and (3) to serve as an educational institution in which medical students might obtain good clinical instruction. As regards the first of these, we have already strongly urged the importance of doing something towards the relief of early mental disorders in poor persons. At the present time there is no institution where they can go until the mental change is so far advanced that a certificate of insanity can be given, and even then there is nowhere for them except the county asylum where they are compelled to associate with a large degenerate population. No one who has studied mental disorders can help deploring that those who were intrusted with the provision of institutions for the insane should have fallen into so grievous an error as to build large asylums in which multitudes of degenerate humanity are segregated together. The prospects of the recovery of a curable case must be lessened by his associations, for the whole working of the place must be regulated by the needs of the majority—the 90 per cent. or more who are demented. From the ratepayers' standpoint one huge asylum may be cheaper than several smaller ones, and even this we doubt, but from the patient's point of view it must be wrong. And this brings us to what would appear to be a weak spot in the scheme. For two reasons we doubt whether the London County Council is the body best fitted to carry out this project. In the first place, the asylums committee of the Council will have difficulty in modelling this new hospital on fresh lines and in dissociating from it the methods in vogue at the county asylums, and in the second place there will be the danger that in a short time the public will fail to differentiate between them and will regard the hospital in the light of the county asylum. The Lunacy Act of 1890 endowed the local authority with powers to provide asylum accommodation: "A local authority may provide asylum accommodation for pauper and private patients, together or in separate asylums, and may provide separate asylums for idiots or patients suffering from any particular class of mental disorder."

That the London County Council should have allowed 18 years to pass without being successful in providing special institutions in which to deal with recent curable cases is not

a strong recommendation of its fitness to carry through this scheme. No doubt there are many members of the Council who take a keen and enlightened interest in the welfare of the mentally afflicted, but the problem of how to house the insane has tended to outweigh all other considerations in the minds of the Council as a body. The establishment of a pathological laboratory at Claybury has been the means of some excellent research work being done under the directorship of Dr. F. W. MOTT; but as Dr. MAUDSLEY points out "the distance of this laboratory from London and the difficulty of getting to it, with the loss of time involved, have made any systematic instruction impossible and detracted much from its value." For the rapid advancement of the knowledge of any disease experience has taught us that the hospital must be in close proximity to a medical school which is fully equipped with appliances for clinical or pathological research. This principle has never been carried out in England so far as the study of psychiatry is concerned, and it is certainly time that this large subject should be brought into line with the other branches of medical science. Dr. MAUDSLEY emphasises this point in the closing sentence of his letter to Mr. HARRIS, for he writes: "I will only add, in conclusion, the expression of my belief that the establishment of such a hospital in vital touch with the general hospitals and the University of London would do much to break down the unfortunate isolation from general medical knowledge and research in which the study and treatment of insanity remains." The proposal is that the hospital should be built to accommodate 100 patients, of whom 60 or 75 should be of the poorer classes for whom the parishes would pay. We could almost wish that this experiment might have been tried apart from parishes and municipal rates. It is a scheme so far-reaching and of such vast importance that we should like to have seen the establishing of it left to a governing body of private individuals and the financial support obtained on lines similar to those of the great general hospitals. The Lunacy Act of 1890 might require amendment in certain directions but even this might not be necessary, and the advantages gained would be immense, for mental disorder would be at once relegated to its proper place side by side with disease in general.

Dr. MAUDSLEY is to be congratulated heartily on his humane and beneficent scheme and if it matures as we shall hope to see it mature his generosity will be rewarded by the thanks of those who, merely suffering from some temporary exhaustion or fatigue, have been saved from the county asylum, and posterity will regard him as one who did much to break down the artificial barrier which for centuries separated mental from physical disease.

Enteric Fever and Flies in New York.

ALL those who are old enough to remember the precepts commonly inculcated upon children during the early Victorian period will recall the importance which was attached to the duty of being thankful because other persons were worse off than themselves; and this duty, as an integral part of patriotism, was certainly held to be as imperative upon communities as upon individuals. Even now in this country, notwithstanding considerable progress and much improvement during recent years, our public sanitary administration cannot be regarded as entirely satisfactory; but our grandparents, if they were still with us, would be able to point to a topic of consolation in the far worse condition of our enlightened and wealthy transatlantic contemporaries, the inhabitants of the great and growing city of New York. It is only too notorious that the administration of municipal law in the United States is sometimes controlled by considerations unconnected with the welfare of the populations concerned; and in New York some of the evils hence arising have attained a magnitude which has induced the "Merchants' Association" of the city to appoint a "Committee on Pollution," the report of which is before us. It does not, as might at first be conjectured, refer to the moral atmosphere of localities which President ROOSEVELT has lately been endeavouring to purify, but solely to the permitted prevalence of physical conditions favourable to the diffusion of disease. It describes a state of neglect under which the whole shore fringe of the great island of Manhattan, on which the city stands, and the neighbouring shores of Brooklyn and Jersey City, have become covered with excremental filth and are the breeding places of innumerable swarms of flies, by which, there is only too much evidence to show, this filth is conveyed to the food of the population. Such accumulations are prohibited by a law dating from the year 1903, neglect of which is punishable by a fine or fines leviable upon the community concerned; and we are informed that the penalties for violations of this law, now due from the city of New York, amount to $47,337,935, or about £9,500,000 sterling, and that they are increasing at the rate of about £6240 per diem. It does not appear that there is any personal liability for these amounts, nor does it appear to whom they are payable, nor what would be done with the money if it were paid; but such a condition of even nominal municipal indebtedness can hardly fail to occasion some uneasiness to those by whose neglect of duty it has been suffered to accumulate. As to the effects upon public health, we learn that there are about 650 deaths annually in New York from enteric fever and about 7000 from "other intestinal diseases." The latest figures to which we have access show the population of the city, including the boroughs of Brooklyn, Richmond, and Queen's, to have been 3,437,202 in 1900. The population of the administrative County of London in 1906 was 4,721,217; the deaths from enteric fever were 260, and those from epidemic diarrhœa, infective enteritis, diarrhœa, and dysentery amounted in all to 4507. Apart from an absence of indebtedness the inhabitants of London have manifestly a great deal to be thankful for.

The value and importance of the New York report, however, are to be sought less in its figures, eloquent as these may be, than in the efforts of its author, Dr. DANIEL D. JACKSON, to throw light upon the channels of diffusion of the diseases with which it is principally concerned. His attention has been chiefly directed towards the activities in this direction of the common house-fly, against which he has formulated an extremely grave indictment. He has instituted a series of observations upon the number and activity of flies at different periods of the year, observations

conducted by means of traps for catching them alive in all parts of Manhattan and other infected districts; and he has established a close and apparently constant connexion between these factors and the number and severity of the cases of enteric fever and of serious intestinal disease. He has also established the greater prevalence of these diseases along the shore fringe of the island than in the interior; and he has shown that shore fringe to be polluted by human excrement along practically its whole extent. On this excrement the flies deposit their ova, in it their larvæ live and feed, and from it they proceed directly to the shop of the provision dealer or to the milk jug of the family. Captured flies, after being first thoroughly cleaned, were suffered to walk over excremental material and re-examined, with the result that they were found not only to pick up this material and to carry it abundantly but also to deposit it, in a state of active vitality, upon gelatin plates over which they were subsequently suffered to crawl. In one instance a fly captured in South-street was found upon examination "to be carrying in his mouth and on his legs over one hundred thousand fæcal bacteria." It is further said that "he had been walking over human excreta on the water front, and was on his way to the nearest milk pitcher." Dr. JACKSON enters into some interesting details concerning the fertility of flies and says that the mature insect issues from the pupa about 10 or 12 days after the egg has been deposited. There will be 10 or 12 generations in the course of a summer and a single female will deposit as many as a thousand eggs.

The great discovery of the late Dr. WILLIAM BUDD that enteric fever, as it prevailed in his day in agricultural localities, was mainly diffused by a water-borne contagion, while on the one hand it led to the protection of water against fæcal pollution and hence to a great diminution in the prevalence of the disease, has unquestionably tended to divert attention from the fact that fæcal pollution may occur through many other channels and that the protection of water does not afford to communities the full measure of safety which was once expected to arise from it. Not only the history of many Indian or campaigning epidemics but also a large amount of experience derived from civil life at home has shown that the protection of water-supplies has diminished the prevalence of fever to an appreciable or even large extent but that it has failed to banish the disease or to meet the full necessities of the case. Channels of diffusion still remain and conjectures as to their precise nature, their number, and their variety have been almost endless. The fly has long been suspected and attention has been called in our columns to its iniquities as demonstrated by Dr. R. M. BUCHANAN,[1] but the charge has never before been formulated so precisely or sustained by such cogent evidence as in the report now before us.

[1] THE LANCET, July 27th, 1907, p. 216. See also THE LANCET, Sept. 14th, 1907, p. 779.

ST. JOHN AMBULANCE ASSOCIATION.—On Feb. 26th a meeting of the Chapter-General of the Order of the Hospital of St. John of Jerusalem in England was held at St. John's Gate, when it was reported that the Princess of Wales had expressed her intention of presenting, at the Portman Rooms on May 15th, the railway challenge shield, awarded by the St. John Ambulance Association, after the annual inter-railway ambulance competitions.

Annotations.

"Ne quid nimis."

THE GENERAL MEDICAL COUNCIL: MEETING OF THE EXECUTIVE COMMITTEE.

A MEETING of the executive committee of the General Medical Council was held on Feb. 24th, Principal Donald MacAlister presiding. One important piece of business before the committee was the proposed application of Part II. of the Medical Act, 1886, to the Province of Quebec. The College of Physicians and Surgeons of Quebec having passed the suitable by-laws the Executive Committee decided that the province had provided an equitable basis for the establishment of reciprocal relations with the mother country in respect of medical registration. Another interesting matter was the suggestion by the University of Edinburgh that a proposed degree in pharmacy should be conferred as a degree in the Faculty of Medicine. The University of Glasgow objected to this course and their objection has been upheld, very rightly we think, by the Executive Committee of the General Medical Council on the ground that the association of a degree in pharmacy with a faculty in medicine would frustrate the declared purpose of the Medical Acts, which is "to enable persons requiring medical aid to distinguish qualified from unqualified practitioners."

THE ROYAL COMMISSION ON WHISKY.

IT may be noticed that in the terms of reference with which the above Commission has to deal the final clause runs "and to make the like inquiry and report as regards other kinds of potable spirits which are manufactured in, or imported into, the United Kingdom." Clearly, therefore, the Commissioners are required to go not only into the question of whisky but into the questions also of brandy, rum, gin, and even liqueurs. If we are right, then equally clearly the title of the present Commission is too narrow and the Royal Commission on Potable Spirits would be a better description. We understand that the Commission has got to work and that its members are already busy in arranging the course of business in regard to the kind and number of witnesses whom they consider that it is expedient to hear. Some evidence, indeed, has already been heard, chiefly from Excise officials, on the quantities of spirits made and consumed and on the methods of distillation employed. It may be presumed also that some arrangements will be made to have fresh evidence on the questions of the chemistry of potable spirits and of the value of analytical methods in the light of recent knowledge on the subject. It will be within the memory of many of our readers that a similar inquiry was made by a Select Committee of the House of Commons nearly 20 years ago and that its report was published early in 1891. This committee was appointed to consider whether on grounds of public health it was desirable that certain classes of spirits, British and foreign, should be kept in bond for a definite period before they were allowed to pass into consumption, and to inquire also *into the system of blending* (the italics are ours) British and foreign spirits in or out of bond and into the propriety of applying the Sale of Food and Drugs Act and the Merchandise Marks Act to the case of British and foreign spirits and mixtures of the same. In our opinion the work of this committee was, so far as it went, excellent but it did not go far enough. The members of this committee did not attempt to lay down a legal definition for each and all of the ardent liquors belonging to the class of potable spirits, nor did they feel justified in recommending any increased restrictions on the methods of blending practised by the trade, nor in suggesting

any provision by which the bonding of all spirits for a certain period was to be made compulsory. Further, they came to the conclusion that a standard of purity could not be applied to the spirits made in this country or to those imported from abroad. They, however, were of the opinion that the Customs officers should support the operation of the Merchandise Marks Act by taking precautions that spirits were not falsely described either as to their character or country of origin while they are in bond or delivered from bond. It may be pointed out that the interest of the Customs officers in the question is chiefly that of revenue. The fact about this report is that this committee was largely guided by the statements of the trade. Its point of view, judging from the negativeness of its recommendations, did not appear to be so much that of the public and their interest as the view that further legislation would hamper and harass the trade. At all events the committee was very lenient to the trade, a leniency which, in our opinion, not a few members of the trade have abused This abuse has now reacted upon them. The situation was made plain by the report of THE LANCET Analytical Commission on Brandy which appeared in THE LANCET of Nov. 29th, 1902. In this report was laid bare the fact that the sophistication of spirits could be detected by careful chemical analysis. Otherwise we should have heard nothing of the great brandy and whisky prosecutions which were subsequently successful in gaining convictions based on this evidence. It has more than once been stated that we did nothing new in the steps which we took, that the methods of analysis upon which we founded our interpretation were well known. It seems strange if that is so that no serious attempts were made to control the sale of potable spirits until after our articles were published. We freely admit that the methods were well known at all events abroad if not in this country; but we must reserve to ourselves absolutely the credit of putting these methods into such lively application as to start a crusade in this country against the obviously evil doings which were going on in the spirit trade—a crusade which has culminated in the appointment of a Royal Commission, a crusade which has already enlightened the public on a subject concerning which they were previously in the dark, and a crusade which is calculated to spread, if not to establish, the practice of honest dealing not only in this matter but in other matters also. If the Royal Commission just appointed only succeeds in getting things honestly described, and compulsorily so, and a label on them which does not lie, it will earn the gratitude of the entire community.

TRIPE.

SOME interesting facts regarding the preparation and importation of tripe are given by Dr. A. W. J. MacFadden in a recently issued report to the Local Government Board.[1] Many people have a strong partiality for tripe and it is specially convenient to those who on account of defective teeth or for other causes require a soft meat food. In some parts of England, especially in the cotton-spinning districts, tripe is an important item in the ordinary dietary of the working-class population. Tripe comprises the first stomach or "paunch," the second stomach or "honeycomb," and the fourth stomach or "reed" of the ox, together with the rectum or "roll." Formerly the householder used to buy tripe directly from the butcher and gave it many hours' boiling at home. In the present day, however, tripe as purchased has almost always been prepared by the tripe boiler. The mucous surface is scraped off and the tripe is boiled in coppers. In Lancashire about four hours' boiling is usually given, the peritoneum is stripped and the tripe, after soaking in cold water, is ready for consumption at local tripe shops where it is usually served cold with appropriate condiments. In London and the South tripe is considered a winter dish to be eaten hot and gets some additional boiling in water or milk when being prepared for the consumer. Tripe intended for London use is usually boiled for two or two and a half hours by the tripe boiler. The quantity of tripe derived from animals bred in this country or from imported animals slaughtered at the ports of arrival is estimated at some 9000 tons yearly. Dr. MacFadden found that (with some notable exceptions) the conditions of manufacture observed by tripe boilers in London and Lancashire could be considered generally wholesome and cleanly. Great care was taken to prevent decomposition and a systematic and speedy method of procedure seemed to be established at all the works visited. No preservative solutions were used at these works. The importation of foreign tripe is considerable and is estimated to have reached already some 1700 tons yearly. Part of this is frozen tripe from Argentina which is prepared by tripe boilers in this country in the same way as home-produced tripe. Argentine tripe has little flavour and has made its way chiefly by its greater cheapness. Apart from its possessing greater liability to decomposition than fresh home-prepared tripe it does not appear to possess any special qualities which make it objectionable from the public health point of view. The case is otherwise, however, with tripe imported from the United States and Canada in kegs containing solutions of boron or sulphurous acid compounds. "Keg tripe" has been cooked before exportation and large quantities are sold by provision dealers as an article ready for eating. Samples taken from four different kegs were examined by Mr. P. A. E. Richards, F.I.C., who found that the tripes, after washing in running water, contained boron preservative equivalent respectively to 62, 67, 128, and 157 grains of boric acid per pound of tripe. Other samples tested for Dr. J. Robertson in Birmingham showed from 31 to 108 grains of boric acid per pound of the meat. Dr. MacFadden considers that serious objection should be taken to tripe of this kind both an account of the habitual presence of boron preservatives in quantities which of themselves constitute a risk to the health of the consumer, and of the further risk incidental to the use of preservatives that much decomposition may at times have actually taken place before the sense of smell can detect it.

[1] Reports of Inspector of Foods: No. 4. London: Wyman and Sons, Fetter-lane; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. Price 2d.

THE METROPOLITAN WATER-SUPPLY.

THE report of the water examiner as to the Metropolitan water-supply for November last has recently been issued and does not make such satisfactory reading as did its immediate predecessors. Thus we find the condition of the Thames for four days at the beginning and four days at the end of the month described as "bad," and for three days near its beginning as "indifferent." This was largely due to the increased rains which fell at the end of October and in the latter part of the month under consideration. The usual effect ensued in the case of those supplies in which the storage accommodation is still inadequate and where in consequence flood water has to be let through the filters without proper time having been given to it for settlement. As we have said before, the chief sufferer in this respect is that part of the Grand Junction district which is supplied from the Kew Bridge works, where, in the words of the report, "a large proportion of the water treated is practically raw river water," an extremely unsatisfactory state of affairs, for the remedy of which a suitable storage scheme is needed urgently. Turning to the bacteriological side, we find that in testimony of the efficacy of the filtration the report states, in its accustomed formula, "in November, whereas 90·4, 100·0, and 71·4 per cent. of the samples of *raw* Thames, Lea, and New River water

respectively contained typical bacillus coli in one cubic centimetre or less of water, 83·4, 88·1, and 85·7 per cent. of the filtered samples derived from the Thames, Lea, and New River respectively contained *no* typical bacillus coli even in 100 times as much water, namely, 100 cubic centimetres." The reason for this transposition of the standard of comparison from the positive to the negative side is not quite apparent, but it may be made a little clearer if we alter the statement of affairs to a different form of words—viz.: "Although, as the penalty of using a sewage-polluted water-supply, on examination of one cubic centimetre samples of the water in its raw state, 90·4, 100·0, and 71·4 per cent. of these respectively are found to contain the bacillus coli, and in consequence the Board is obliged to filter it very carefully, for all it can do, on examining samples of quantities ranging from 1 to 100 cubic centimetres it still finds that 16·6, 11·9, and 14·3 per cent. of these samples respectively *do* contain bacillus coli and are distributed to the public with that pollution." This interpretation has the authority of Dr. A. C. Houston's table B.e. in the appendix of the report, and it should serve to explode that oft-repeated fallacy that London has a practically sterile water-supply. It is only fair to the compilers of the report to say that they are fully alive to the imperfections of the present arrangements.

THE KING EDWARD VII. SANATORIUM.

THE first annual report of the Midhurst Sanatorium for the Treatment of Pulmonary Tuberculosis shows that there are now 101 beds available for patients but as these have been filled gradually only 152 cases were treated during the year with an average stay of some 13 to 14 weeks. The list of occupations of the patients shows that a large majority of them belong to the professional and "middle classes." They are not only drawn from many English counties but from such distant parts as China, India, and Africa. The routine treatment of the patients has been considered carefully but as regards both diet and exercise is subject to such individual modifications as may seem advisable to the medical officers. The standard dietary is on a liberal scale but is not calculated for the "stuffing" process which was at one time considered a necessary adjuvant to the open-air treatment of tuberculosis. The quality and hours of the meals are such as the majority of the patients are accustomed to at home, dinner being served in the evenings. A point is made of especially varying the diets of patients confined to bed. Alcohol is prescribed at discretion. The tradition of monotonous idleness of mind and body has been completely broken down at Midhurst, three hours daily being prescribed for "recreation," in the organisation of which a Patients' Amusement and Concert Committee does useful work. Following the example of graduated labour set by the Brompton Hospital Sanatorium at Frimley the routine of "treatment walks" is varied in suitable cases by work in the garden and grounds of the sanatorium and in the pine woods near it. Outdoor carpentery, poultry tending, and the construction of a cinder tennis court have helped to occupy the time of some of the patients. The report classifies the cases in three convenient clinical classes according to the severity of their signs and symptoms, and tables are appended giving a detailed summary of each case. 46 patients fall in Group I. (the mildest cases), 64 in Group II., and 42 in Group III. Of the total, 152, 40 were discharged with the disease "arrested," 62 "much improved," 32 "improved," 6 "stationary," 10 "worse," whilst two died in the sanatorium and 17 after discharge, of which latter five had been in Group II. and 12 in Group III. A careful study of the condition of the throat of each patient showed "a distinctly pathological condition in 32 instances, approximating" 20 per cent., laryngeal tuberculosis accounting for most of the cases. The report finishes with the statement that up to July 24th 500 opsonic indices had been taken on 40 patients, "but many more are required, and, as yet, the results are not ripe for publication." The report as a whole shows that this institution bids fair to fulfil the beneficent intention of its founder.

THE ROYAL SOCIETY OF MEDICINE.

THE interesting report of the Council of the Royal Society of Medicine presented to the annual meeting on Tuesday last showed the society to enjoy a very strong position, financially speaking much stronger than the most sanguine estimates had predicted. A substantial excess of income over expenditure during the first six months of the society's work must come to the pioneers of a difficult amalgamation as a most welcome relief of their anxieties.

THE "BACILLUS CARRIERS" OF ENTERIC FEVER.

THE report upon an outbreak of enteric fever at Brentry Inebriate Reformatory which was recently made to the Home Office by Dr. R. W. Branthwaite presents aspects of exceptional interest in that it is one of the first outbreaks, if not the first, in this country to be attributed to the influence of a person who having had enteric fever several years ago still acts at intervals as a "carrier" of the specific bacillus, although the health is thoroughly satisfactory. The outbreak here in question occurred at an inebriate reformatory arranged in 16 separate buildings scattered over an estate of 98 acres. Since the foundation of the institution in 1899 until the latter part of 1906 the inmates were entirely free from any infectious disease, but in September, 1906, a case of enteric fever occurred and between then and November, 1907, no fewer than 28 cases with two deaths were recorded. The total population of the institution was 265, there being 235 inmates and 30 officers. Of the 28 cases 11 were amongst officers or their wives, one was a visitor to the institution, and the remaining 16 were inmates. The incidence upon the staff was apparently some 36·6 per cent., while that upon the inmates was only 6·8 per cent.—a very material and significant difference. The first case was that of a woman who had been some months in the institution and careful investigation failed to discover the source of the disease, and notwithstanding every precaution as regards the food-supply and other possible agencies another case or two occurred after a brief interval. Hopes were still entertained that as every precaution had been taken no further cases would ensue but unfortunately fresh cases arose and the only clue as regards causation was that the evidence pointed rather to milk contamination than to general infection of food. Three officers who boarded themselves outside the institution and who had no food from the reformatory except milk were attacked, and of the few inmates who suffered from the disease three were mothers with infants who received an extra allowance of milk not given to other inmates. The officers generally were supplied with milk in an unmixed state, while the inmates, with the exceptions mentioned and to be mentioned, were never given milk except after admixture with boiling tea or cocoa. It is a significant fact, as regards the milk-borne theory, that all the inmates who were attacked, except mothers with infants, were working in the kitchens or messrooms where they had access to milk in an unmixed state. Finally, a little outbreak involving two cases occurred in connexion with a tea-party of three persons given at the institution by the matron. Two of these persons who partook of "clotted cream" were attacked with

enteric fever, the third who abstained remained free from attack, and the whole of the foregoing evidence was regarded as pointing clearly to milk infected previously to imperfectly performed sterilisation and to infection subsequently to sterilisation. Every obvious precaution was taken to eliminate the chances of infection at either of these times and the milk was handled by two persons only, the dairy officer and a Mrs. X, an inmate, both of whom enjoyed excellent health. Cases, however, still occurred in a fashion which pointed to continued milk infection and Dr. Branthwaite sought the assistance of Dr. D. S. Davies, the medical officer of health of Bristol, and of Dr. Francis T. Bond of Gloucester. Dr. Davies was apparently fresh from a perusal of German literature relative to "carrier" cases as also was Canon Parker, the chairman of the house committee. Consequently, the inmate Mrs. X, who had been in the dairy, was removed on suspicion and after inquiry this Mrs. X was found to be one of the six female inmates of the institution who had suffered at one or another time from enteric fever. All were examined for Widal's reaction but Mrs. X was the only person who yielded suspicious results. On two occasions her excreta were examined for enteric fever bacilli with negative results but on the third occasion pure cultures were obtained and "the woman was thus proved to be in a highly infective state." The removal of Mrs. X from the dairy was followed by the cessation of the intermittent cases and her presence first in the kitchen and subsequently in the dairy was regarded as in all probability the cause of the cases which followed. This story as told by Dr. Branthwaite and which ended thus dramatically certainly carries with it a strong degree of probability, but it has, of course, to be borne in mind that there may be a not inconsiderable number of "carriers" about whose presence has not led to outbreaks and whose bacilli may not, as a matter of fact, possess much infecting power. On the other hand, of course, the majority of these "carrier" cases have not had the favourable opportunities of infecting a highly nutritious medium such as was afforded in this case by the milk and "clotted cream." We are glad to hear that the subject of enteric fever in relation to these "carrier" cases will shortly come up for discussion at the Epidemiological Section of the Royal Society of Medicine.

CROSSING THE STREETS.

THE perils of crossing the streets in towns and cities in which, like London, motor traffic is becoming predominant are increasing very seriously. "Knocked down by a motor bus" or other motor vehicle is becoming a common heading of newspaper paragraphs, and it seems to us that the people on foot have a right to claim some further protection against accident than is provided for them by the acuteness of their senses and their own alertness, especially as there are wayfarers who have not the faculty of taking things at the right time or of successfully steering clear of two streams of motor traffic proceeding in opposite directions. Moreover, the absent-minded are entitled to some consideration. The tooting of the horn is, as a rule, not far short of being simultaneous with the approach almost to touching point of the swiftly moving motor. And so nervous individuals are practically compelled to give up the crossing of the streets unless there is a friendly subway which is rare. Individuals who were not previously nervous are rapidly becoming so when the crossing of a street amounts almost to a rush across a busy railway junction. The right of the pedestrian to the road is gradually being wrested from him and certainly most motor drivers have little respect for him. This right must not be yielded and the conductors of motor traffic on the roads must be made to learn that pedestrians have as much claim to the use of the road as they have. What we think should be done now that the old relatively slow horse traffic is being so rapidly ousted by motor vehicles is that more "islands" should be placed in the main streets. Such refuges at least enable the pedestrian to keep an eye on one stream of traffic at a time. But it is next to impossible to calculate upon the safe chances of passing through two lines of fast motor traffic going in opposite directions. We think therefore that the public should be assisted in this matter and that more "islands" should be placed in the streets. We commend the suggestion to the police and the street authorities as we are convinced that the risks of crossing the busy streets, which are very rapidly increasing, would be considerably reduced if the traffic could be divided, at shorter intervals than is now the case, into distinct up and down lines.

WHEN TO OPERATE IN GASTRIC ULCER.

IT is recognised by physicians and surgeons alike that certain cases of ulcer of the stomach need operation, but there is the greatest diversity of opinion as to the cases which are suited for surgical interference. Some would restrict operation to those ulcers which have perforated but it is generally allowed that the best treatment for many other cases is also operation. Dr. Franz Torok of New York has contributed a valuable article to the February number of the *American Journal of Surgery* on the question of the choice of cases of gastric ulcer for operation. He commences by endeavouring to obtain statistics as to the results of medical treatment and he selects those furnished by Leube, which show 74 per cent. "cured" and 22 per cent. improved, so that if we were to judge merely by these results only some 4 per cent. of all cases of gastric ulcer would need operation. These, however, are merely the immediate results of treatment. Warren took the trouble to follow up his cases for several years and he found that only about 34 per cent. were permanently cured, 43 per cent. had recurrences, 3 per cent. developed carcinoma, 10 per cent. died from perforation or hæmorrhage, and 10 per cent. developed pyloric stenosis. So that even if we put out of consideration the 43 per cent. with recurrence, 23 per cent. were absolute failures; thus more than one case in five would require surgical treatment. When an ulcer refuses to heal or recurs rapidly or repeatedly surgery can often lead to the healing of the ulcer with relief of all the symptoms, and gastro-enterostomy is certainly the best surgical procedure. If performed early before exhaustion has occurred the results are excellent. Lieblein has collected 73 cases of gastro-enterostomy for uncomplicated gastric ulcer, and of these nine died, but five of these died from exhaustion, a proof that the operation was performed too late. Even when these are put aside it may seem that the surgical results are very much worse than those of medical treatment, but the two sets of statistics are not comparable, for the surgeon, as a rule, treats only the cases which have failed to improve with medical treatment. When acute hæmorrhage complicates a gastric ulcer surgical treatment cannot show any very brilliant results, for the cases "cured" by excision amount to only 40 per cent., for it is often very difficult, and sometimes impossible, to find the ulcer. Gastro-enterostomy, however, is usually a satisfactory method of treatment for subacute hæmorrhage, and for the chronic cases with recurrent hæmorrhages gastro-enterostomy is best and the operation has a mortality of only 10 per cent. For perforation medicine can do nothing, in early operation lies the only hope, and that hope is not small if the interval between the perforation and the operation is less than 12 hours, for Dr. Torok puts the mortality of cases operated on within 12 hours at less than 29 per cent. For pyloric stenosis also an operation is needed as medicinal treatment is almost

valueless and the results of surgical interference are very good. The exact operation will vary with the condition present. To sum up, Dr. Torok claims that in addition to cases with perforation or with stenosis of the pylorus all cases of gastric ulcer in which medical treatment fails to cure or which relapse frequently or in which the hæmorrhage is weakening the patient should be treated by operation.

THE RECENT STATE TRIAL IN ITALY.

"INTERESTS, professional and educational, social and political, even medical and psychological," writes an Italian correspondent, "combined to make the trial of Signor Nunzio Nasi, ex-Minister of Public Instruction, one of the most remarkable that ever engaged a Parliamentary tribunal. Here was a man of rare endowments and accomplishments who, from humble beginnings, had fought his way upward in political life till he not only was twice a Minister of State but was even placed in the running for the Premiership itself. The poet Gray in his 'Ode on a Distant Prospect of Eton College,' forecasting the several careers of the happy boys 'disporting on the margent green' of the Thames, has anticipated the thought of many a compatriot of Nunzio Nasi who has witnessed the rocket-like ascent of the ex-Minister, his sudden outburst into radiance, and his speedy fall to the ground :—

> 'Ambition this shall tempt to rise,
> Then whirl the wretch from high,
> To bitter scorn a sacrifice,
> And grinning infamy!'

For the sentence itself—of a period of imprisonment, of a fine, of the payment of the expenses of a long and far-reaching trial, with deprivation of the honours, titular and other, bestowed by king and court; worst of all, exclusion, for a term of years, from intervention in official life—is but light when compared with the exposure of practices too sinister to 'live down,' too crushing in their *ensemble* to admit of their author's rehabilitation. The story, tragic in itself and replete with dramatic incident, is soon told, though we have to go back four years to find its beginning. From the January of 1904, at which time Signor Nasi, representing Trapani in Parliament, was installed as Minister of Public Instruction at the Minerva (Education Office) in Rome, rumours began to get abroad of abuses practised there—abuses taking the form of favouritism and bribes, euphemistically called 'subsidies.' In the February of that year certain Members of Parliament interpellated the President as to these abuses and demanded the production of documents relating to Nasi's tenure of office. Placed on his defence Nasi was able to impress the House favourably, thanks to his skill as a special pleader and the witchery of his address; but still the investigation was proceeded with and by March 22nd the investigating body (the Giunta di Bilancio) gave forth an opinion of his conduct which brought him again before the House which appointed a committee of five to sift the matter to the bottom. On the 31st a sensation was caused by the flight of Signor Lombardo, Nasi's secretary, for whose arrest an order was issued, and from that day the ex-Minister appeared to all a doomed man. On May 5th the committee made its report—a terrible indictment—and the House authorised the public prosecutor to proceed. On the 6th Nasi fled, no one knew whither, and for the next three years the press and the political world were agitated by controversy as to his guilt between those of his friends who remained loyal to him and the advocates of moral purity in high places. Meanwhile, the 'question of competence' had been submitted to the Court of Cassation, which on June 11th, 1907, declared the ordinary tribunals to have no jurisdiction in the case—a decision much commented on at the time. On the 16th the leader of the Extreme Left in Parliament carried a motion that the matter should be deferred to the Alta Corte (the supreme court of the Upper Chamber). The instant that became known Nasi emerged from his concealment and in a telegram dated from Bologna announced his speedy intervention in Parliament, when the decision of the Court of Cassation was to be discussed and thereafter the reference of the case to the Alta Corte. On the 28th Nasi appeared and spoke in his own defence before a crowded assembly which remained cold and unconvinced. He had barely withdrawn when the House appointed three commissioners to prosecute him before the Alta Corte, and in due course he was arrested and imprisoned but was allowed, on grounds of health, to be transferred to his own house where he remained under custody till the trial which closed with the sentence above referred to on the 24th ult. That sentence, by the press and the public, except in Sicily, where insular *chauvinisme* maintains the innocence of its representative in defiance of the evidence, has been generally approved—the attempt to make the offender out as 'irresponsible' from megalomania having failed, in spite of authoritative pleading, backed by high medical names, including those of Mosso and De Giovanni. His chief counsel, the Avvocato Muratori, showed great legal skill and resource as well as rhetorical address in minimising the extent of his guilt, and to him, indeed, it is commonly believed to be due that the sentence is not more severe. But to all who know the condition of urban and rural Italy in the matter of education—the 'analfabetismo' (inability to read or write) of more than a third of the population—to say nothing of the universities struggling with impecuniosity and clinical and research work literally starved—the malversation to political purposes and personal ambition of the all too scanty fund reserved by the State for public instruction seems a misdemeanour, indeed a crime, of the gravest magnitude. One good result of the trial will be the thorough purification of the Minerva (Education Office) and the consequent cessation of abuses which have made its administration a byword throughout Italy. Indeed, a Bill framed with that object has just been submitted to Parliament by one of the Florentine Members and appropriately emanates from a city which, as the centre of Italian culture, is peculiarly interested in redeeming united Italy from the charge of educational inefficiency so long and so justifiably brought against her."

THE KEEPING PROPERTIES AND DOSAGE OF LIQUID EXTRACT OF ERGOT.

IN the *Pharmaceutical Journal* of Jan. 25th Dr. J. Gordon Sharp makes a practical and useful contribution to our knowledge of the keeping properties of liquid extract of ergot. He purchased a quantity of the preparation with the object of trying to discover how long it would retain its activity. A one-ounce bottle was filled from the stock bottle from time to time and no attempt was made to protect the contents from light or air. The preparation was administered by the mouth in 30-minim doses which, in Dr. Sharp's experience, should produce the full pharmacological action of the drug within 20 minutes. The trials extended over a period of 12 months, at the end of which the fluid extract was found to be perfectly active, a dose of 30 minims producing a contraction of the uterine muscle six minutes after it was given, this effect being still well marked 15 minutes after administration. As a result of these trials Dr. Sharp considers that a well-prepared liquid extract of sound ergot will remain active for a year or for as long as the preparation can reasonably be expected to keep. The paper contains interesting remarks on the dose of ergot. Some physicians give half a fluid ounce of the liquid extract, repeating the dose within an hour, often without producing the desired contraction. Such

doses, however, are excessive, as the recent work of Dr. Dale has proved that in small doses ergot contracts the uterus, while in very large doses it has a distinctly relaxing effect on this organ. It is probable, therefore, that much of the blame which has in the past been thrown on the drug was really due to the administration of excessive doses. In some cases a dose of 45 minims of the liquid extract will produce a relaxing effect on the uterus. It is interesting to note that until Dr. Dale and his collaborators showed that ergotoxin was the chief, if not the only, active constituent of ergot much confusion existed as to the chemistry and pharmacology of the drug. It was commonly but erroneously thought that ergot contained two active principles, one acting directly on the muscle fibres and contracting the uterus, and the other acting indirectly on the muscle through the sympathetic nervous system and producing inhibition or relaxation of the uterus. Under this assumption the failure of large doses of ergot to produce contraction would be wrongly ascribed to the drug itself.

LADY MINTO'S INDIAN NURSING ASSOCIATION.

IN THE LANCET of July 28th, 1906, p. 266, we recorded briefly the inception of a scheme for providing Europeans resident in India with an adequate nursing service which should be available for all classes of our countrymen in the Indian Empire. The urgent necessity for such a service was first recognised by the late Lady Curzon, and a committee, of which she was president, presented a scheme on an official basis to the Secretary of State who, though in sympathy with its objects, was obliged to refer it back mainly on financial grounds. Her successor, Lady Minto, attacked the matter no less energetically and under the patronage of the Queen founded an Indian Nursing Association, the organisation of which was made to include the already existing Punjab and Up-country nursing associations. Government officials in India and their retired predecessors at home have taken up the work enthusiastically and a subscription list opened in both countries met with a ready response, so that with the addition of a Government grant and the fees earned by the nursing sisters the association has been started on a firm financial basis. We have received the report of its work for 1907 presented to the central committee in India from which we gather that the system which has been adopted is really one of insurance against illness, under which the members of the association pay an annual subscription of Rs.10 if their monthly income is less than Rs.500, and Rs.20 if their income exceeds that sum. These members are entitled to the services of a fully qualified nursing sister in time of illness for a payment of Rs.2 and Rs.4 per diem respectively, an extra rupee being asked for maternity cases, which are only attended in special circumstances, and the sisters also receive their board and quarters. Non-members of the association have to pay Rs.8 for each day of attendance upon them. Corporate bodies, such as regimental messes and firms employing several Europeans, can compound for their members at special rates. The individual interest taken by the association in the welfare of the sisters is an important feature of the scheme. These ladies receive pay which compares favourably with that which they could earn in England and are supported in homes in various centres in the intervals between their cases. They also receive their travelling expenses, for which the railway companies have issued a special tariff, and those sisters who are engaged in England receive a passage each way provided they fulfil their five years' engagements, with a preliminary outfit allowance of £20. An annual uniform allowance is also made to them. They can renew their engagements for two further periods of five years, but are obliged to undergo a "refresher" course of three months' training at a recognised hospital between their periods of service. One month's annual leave and sick leave under medical certificate on full pay are also granted. The central committee, through the lady superintendent, receives confidential reports as to the capacity of each sister from the medical officers under whom they have worked. The honorary secretary in India, Surgeon-Lieutenant-Colonel W. R. Crooke-Lawless, speaks very highly of the work of the lady superintendent, Mrs. E. Davies, in organising the association, and the report of that lady on the condition of the sisters' homes, which are under the ægis of the provincial governments, is very satisfactory. It must not be forgotten that, however enthusiastically such a movement is started, its continued success depends upon continued support, for it can never be a solely coöperative institution. The honorary treasurer in England is Colonel Sir William Bissett, 46, Queen Anne's Gate, London, S.W. We may add that nurses who wish to learn further particulars should apply to Miss Sidney Browne, R.R.C., St. Andrew's House, 29, Mortimer-street, London, S.W., and that only duly qualified ladies of good health and under 36 years of age are eligible for service under the association.

THE NERVOUS MANIFESTATIONS OF ARTERIO-SCLEROSIS.

THE nervous manifestations of arterio-sclerosis, though not uncommon, have received little attention. They must be distinguished from nervous manifestations which may occur with arterio-sclerosis, for the subjects of arterio-sclerosis often suffer from diseases of the kidneys, heart, brain, or other organ which may produce their own symptoms. Possibly these diseases are due to the arterio-sclerosis and therefore the symptoms are indirectly due to it. But for descriptive purposes it is necessary to distinguish them from the symptoms directly due to the arterio-sclerosis. In the *American Journal of the Medical Sciences* for February Professor Alfred Stengel has published an important paper on this subject. He points out that the error of attributing to arterio-sclerosis various symptoms the result of disease accidentally associated with it is great because arterio-sclerosis is nearly universal in the aged. To avoid this error he first describes the certain results of vascular occlusion and then the symptoms associated with arterio-sclerosis which may be attributed to it by reason of their similarity to the symptoms of the first group and by the exclusion of other causes. The sudden occlusion of a large peripheral artery produces characteristic symptoms. There are sudden pain and loss of power in the parts supplied by the vessel. The pain may subside soon, to recur with the production of secondary emboli. Later, intolerable suffering is replaced by continuous aching or by darting pains of moderate intensity. The loss of power is rarely complete and soon diminishes. Other symptoms are pallor, coldness (objective and sometimes subjective), tingling or numbness, weakness or cessation of the pulse, muscular cramps, lividity, and œdema. In persons of advanced years, the subjects of more or less arterio-sclerosis, nervous symptoms occur in the legs and arms which are due to the vascular disease. These are numbness, tingling, a sense of coldness or heat, and other forms of paræsthesia (acroparæsthesia), moderate or severe pain, a sense of stiffness, perhaps actual stiffness, and weakness. These symptoms may increase as the disease advances, but in some cases they increase and decrease according as the heart is or is not able to maintain the circulation in the sclerotic vessels. An important and neglected group of symptoms are those associated with abdominal arterio-sclerosis. It is not sufficiently recognised that a tortuous and sclerotic abdominal aorta, or even a slightly sclerosed pulsating one, may produce intense paroxysms of pain. Professor

Stengel thinks that some cases of continuous backache in old people are due to this cause. In sclerosis of the arch of the aorta painful paroxysms occur on slight exertion, which may have the character of angina pectoris, even though the coronary vessels are not involved. But usually the pain is more diffuse, extending almost equally to the right as well as to the left shoulder and arm, and the relation of the attack to effort is closer than in angina from disease of the coronary vessels. The cerebral manifestations of arterio-sclerosis form a more difficult subject. Possibly many indefinite cerebral symptoms in the subjects of arterio-sclerosis are due to thrombosis of the larger cerebral vessels which is not completely obstructive or to complete thrombosis of finer branches. Such lesions are liable to be overlooked by the pathologist. These symptoms possibly are produced also by arterio-sclerosis without thrombosis. Naunyn first called attention to the occurrence of convulsions in persons suffering from cerebral arterio-sclerosis. Two patients under his care had marked arterio-sclerosis and suffered from attacks of dizziness, headache, twitching of muscles, and great weakness. In one, compression of the carotid arteries caused the development of these symptoms as well as of temporary unconsciousness. A woman, aged 75 years, under the care of Professor Stengel, had markedly sclerosed vessels and some hypertrophy of the heart. She suffered from attacks by night and sometimes by day, which had been diagnosed as petit mal. They consisted of momentary loss of consciousness or bewilderment, followed by slight clonic convulsions of the arms and legs, ending in a period of mental confusion and aphasia lasting from a few minutes to an hour, and followed by deep sleep. After these attacks had occurred with some regularity for a year she had a seizure which left behind moderate hemiplegia. After some months this disappeared but the attacks continued. Evidently the hemiplegia was the result of thrombosis or embolism. Other conditions which appear to be due to cerebral arterio-sclerosis are the attacks of stupor which occur in extreme old age.

ARTIFICIAL NAUHEIM BATHS.

THE use of baths made to resemble so far as possible, by artificial means, those employed at Nauheim in the treatment of chronic diseases of the heart appears to be finding increased favour amongst medical practitioners. There is, indeed, a demand for an institution where such baths can be obtained with the understanding that the patients can remain under the supervision of their own medical advisers during the treatment. We have had our attention drawn to the St. George's Nauheim Institute in George-street, Hanover-square, London, W. The baths and other appliances for the treatment of chronic cardiac conditions seem perfectly satisfactory at this institution, and we can understand the view of many members of the medical profession that the facilities offered here, if offered in the right way, would be of value to many patients. Unfortunately, the directors of the institution, or those responsible for its finance, appealed in the first instance to the public rather than to the medical profession, and issued advertisements in the lay press which merited and received the severest condemnation by medical men. This was a sinister start, but we are informed that the institution is now under medical control and that advertisements in the lay press have been withdrawn for some months and will not be repeated. In the circumstances there is therefore no longer any reason why medical men should not avail themselves in suitable cases of the services of the institution, which we hope may prove a useful adjunct in the treatment of the conditions for which it is intended. We should not have been able to write in this conciliatory manner of the institution had we not received both a definite assurance from those responsible for its management that the medical control shall be effective and supreme, and testimonials from members of the medical profession as to the practical value of the facilities offered.

SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE last report of this association states that during 1907 the association had continued the system of contra-advertising in the medical journals containing advertisements of vacant appointments. Intending applicants were in this way led to enter into communication with the secretary of the association and the information afforded by him has been much appreciated, particularly in cases where the vacancies have occurred through more or less unjust treatment of medical officers by the smaller parish councils. In cases in which attempts had been made to reduce the official salary for attendance on paupers the association advised an appeal to the Local Government Board which in every instance refused to allow the parish council to reduce the salary. One parish council insisted on the medical officer making regular visits to out-door paupers, whether his professional assistance was required or not, and owing to the extent of the district he had in making some of these visits been obliged to pay 20*s.* in horse hire. On this subject the report remarks that the duty of making statutory visits to paupers devolves on the inspector of poor (*Anglice*, clerk to the guardians) and that the attention of the Local Government Board ought to be called to the matter. Four cases of dismissal by parish councils came to the notice of the committee during the year. One parish council wrote protesting against the association's system of contra-advertising, as it put it to a great deal of trouble in filling a vacant appointment. The association, however, only interfered when a parish council had proved itself obnoxious. A Bill entitled "The Parochial Medical Officers (Scotland) Bill" will be introduced in the present Parliament by Mr. Cathcart Wason, M.P. Its object is that a medical officer holding office under a parish council in Scotland shall only be removeable from office by, or with the consent of, the Local Government Board for Scotland.

OLD AND NEW GYNÆCOLOGY.

IN accordance with the pleasing custom which obtains in German Universities the medical staff of the Gynæcological Policlinic of the University of Munich have published a work entitled "Alte und Neue Gynäkologie"[1] in honour of Professor von Winckel's seventieth birthday. The contributors are Dr. E. Aulhorn, Dr. R. Benndorf, Dr. H. Eltze, Dr. M. Kachel, Dr. Th. Petri, Dr. A. Stoecker, and Professor Sakurai, and the editor is Professor Gustav Klein. The first part of the work, containing three historical essays, is of extreme interest. The first, by Professor Klein, is on the illustrations of the female genital organs published from the ninth century up to the time of Vesalius. It is illustrated by a number of reproductions of photographs of old manuscripts, including drawings from the works of Soranus, Moschion, Leonardo da Vinci, and some of the illustrations by Jan van Calcar to the great work of Vesalius "De Humani Corporis Fabrica." The second article is by Professor Klein and Dr. Stoecker on a Spanish treatise on Generation and Pregnancy, published in the year 1495. Professor Klein also contributes a noteworthy paper on the writers on obstetrics in the sixteenth and seventeenth centuries in which he includes Ambroise Paré, Mauriceau, Peu, and Chamberlen. In the second part of the work there are several important papers on modern gynæcology. Dr. Aulhorn discusses the

[1] Alte und Neue Gynäkologie. Herausgegeben von Professor Dr. Gustav Klein. Pp. 174. Price M.12; Gebun. M.15. Munich: J. F. Lehmann. 1907.

results to be obtained by the routine examination of the blood in gynæcological cases. The same writer also records an interesting case of a chorion-epithelioma in the vagina with death from secondary growths in various parts of the body. Dr. Benndorf considers the use of silkworm gut as a fascial suture in laparotomy and Dr. Eltze the treatment of gynæcological affections by the x rays. The editor writes on the Treatment of Retroflexion of the Uterus and the Employment of Spinal Anæsthesia. He concludes that in cases where it is needful to exert marked traction on the uterus or its appendages, as, for example, in the operation of vaginal hysterectomy, spinal anæsthesia is contra-indicated, as it is also in abdominal operations where there are likely to be dense adhesions, as in some cases of pyosalpinx. Dr. Kachel in his paper on the Prognosis of Ovarian Tumours shows very conclusively how unfavourable the outlook is when the tumour is certainly a malignant one. Of 30 such cases operated upon, in 24 it was found impossible to remove the growth completely. Of the remaining six the tumour in all was apparently removed entirely and there were no signs at the time of the operation of any secondary metastatic growths. In spite of this three of these cases died from recurrence five months, 12 months, and 32 months respectively after the operation. The remaining three patients had been operated upon too short a time previously for their freedom from the chance of recurrence to be certain. An interesting paper is contributed by Professor Sakurai of Nagasaki on the Difference in the Duration of Labour in Japanese and European Women. He comes to the conclusions that while the third stage of labour lasts for about the same length of time in the two races, the duration of the second stage is on an average from a quarter to one-third of an hour less in the Japanese and the duration of the first stage is considerably shorter in that race. The whole work is one of much interest and is well worthy of the occasion which it is intended to honour and of the eminent obstetrician for whom it has been written.

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS, WASHINGTON.

THE International Congress on Tuberculosis will be held at Washington, D.C., the capital of the United States, from Sept. 21st to Oct. 12th next for the public discussion of the problem of tuberculosis. Dr. Lawrence F. Flick of Philadelphia is the chairman, Mr. Henry Phipps of New York is the treasurer, and Dr. John S. Fulton, 714, Colorado Building, Washington, D.C., is the secretary-general. The Federal Government is interested in the Congress. There are nine departments in the United States Government and seven of them will participate in the Congress. The State Governments are also concerned. There are 46 States and every State has its own committee. 37 of these State committees are at work. In 30 of these States the governors have expressed their interest in the Congress and many of them have given most explicit instructions asking all the municipalities and other local governments and the voluntary agencies to combine for the purpose of securing to the State the utmost possible benefit from this International Congress. The following countries will be represented by official delegates: Great Britain (including her more important provinces and colonies), France, Spain, Italy, Germany, Switzerland, Holland, Belgium, Denmark, Sweden, Norway, Russia, Austria, Hungary, Bulgaria, Greece, Argentina, Brazil, Uruguay, Chile, Colombia, Ecuador, Guatemala, Peru, Venezuela, Porto Rico, Cuba, Hawaii, and Japan. The Congress will be divided into seven sections which will give scope to both scientific and lay workers at the problem. There will be an exhibition of methods used in the campaign against tuberculosis and clinics and demonstrations will take place throughout the whole period of three weeks. It is expected that valuable publications will be issued. The transactions will be published in four volumes and will be issued free to all those Active Members who have paid the membership fee which is $5.00. Associate Members who pay a fee of $2.00 will have all the privileges of membership except the right to vote and to receive the volumes of the transactions. The American membership should number, it is estimated, 10,000 persons, but the cost of the congress will far exceed the revenue derived from the fees. This excess, the secretary-general states, "will be provided for by a special committee of the National Association for the Study and Prevention of Tuberculosis which will invest a large sum in the project."

A MURMUR IN THE INTERNAL MAMMARY VEIN

IN the *Australasian Medical Gazette* for December Dr. J. C. Verco has described a case in which a murmur was heard in a rare situation—over the internal mammary vein. The patient was a man, aged 60 years, who complained of pains in the head and attacks of giddiness and unconsciousness. There was choroido-retinitis in the right eye which was probably due to syphilis. The upper part of the sternum was somewhat prominent and below that the bone was slightly depressed. The heart sounds were weak. Over the ensiform cartilage was a continuous murmur which resembled somewhat the purring of a cat and was more marked during inspiration. It could be traced up the right chest along the sternum to the clavicle and outwards to the mid-axillary line. Pressure on the ensiform cartilage or on the right side of the epigastrium immediately abolished the murmur. Over the ensiform cartilage a continuous thrill could be felt. When the patient lay on his back without a pillow the thrill disappeared but the murmur could still be heard. In the epigastrium an obscure resistance could be felt. Œdema of the legs and ascites developed. Paracentesis abdominis yielded 330 ounces of fluid. The liver was then felt two fingers' breadth below the ribs. Lower an obscure mass, chiefly on the right side, could be felt. Later the patient entered a home for incurables where he died. At the necropsy the heart was found to be normal. The liver was very small, weighing only 22½ ounces. It was tough, minutely pitted, and covered with a membrane. On removal of the latter the capsule was found to be quite smooth. The spleen weighed 10 ounces, was rather tough, and had a much thickened capsule. The mesentery was thickened and somewhat opaque. The great omentum was short and thick, turned forwards from the transverse colon, and was attached to the abdominal wall. The round ligament of the liver contained a large vein which easily admitted a lead pencil. After a course of some inches downwards it turned outwards at a sharp angle in the great omentum and ran in it upwards and to the left to the abdominal wall, which it perforated to run over the ensiform cartilage. It then coursed upwards and to the right to join the right internal mammary vein, which was very large. The left internal mammary vein was normal. There was no obstruction of the hepatic vein or inferior vena cava. Dr. Verco thinks that in consequence of the obstruction offered by the contracted condition of the liver the blood from that organ flowed by the umbilical vein to the enlarged internal mammary vein. He suggests that the free passage of blood afforded saved the patient from ascites for a long time. There was no history of alcoholism and the hepatic cirrhosis was regarded as syphilitic.

THE report of the Department of Public Health for Queensland states that four cases of plague were under treatment during the week ending Jan. 25th and that two of them died. Four dead rats, too decomposed for examination but probably plague-infected, were found on the

premises where one of the patients had worked. No case of plague occurred in Cape Colony during the week ending Feb. 8th. 2 cases of plague are reported from Mauritius during the week ending Feb. 28th; one of these died.

THE annual conversazione of the West London Post-Graduate College will be held on March 18th in the hospital, the Duke of Abercorn holding a reception at 8.30 P.M. We are informed that the Dean of the College will be happy to send cards of invitation to any medical men who would like to attend and who write to him at the West London Hospital.

AT the meeting of the Incorporated Society of Medical Officers of Health on Friday, March 13th, Dr. E. W. Hope will read a paper, to be followed by discussion, upon "The Results of the Methods adopted in Liverpool in the Direction of Removing Insanitary Property and Providing Dwellings for the Dispossessed."

WE regret to announce the death of Sir Alfred Cooper, F.R.C.S., recently a Vice-President of the Royal College of Surgeons of England, which occurred on Tuesday last at Mentone. The deaths are also announced of Mr. Reginald Harrison, the well-known surgeon, which occurred on Feb. 28th, at his London residence, and of Dr. E. D. Mapother, an ex-President of the Royal College of Surgeons in Ireland. We hope to publish obituary notices in an early issue of THE LANCET.

MOTORING NOTES.

BY C. T. W. HIRSCH, M.R.C.S. ENG., L.R.C.P. LOND.

MEDICAL men are rightly regarded with favour by motor manufacturers, as the professional field for "business" is a very large one. Certainly a car does appeal to members of the profession and, what is more, has done so, in proof of which one has but to call to mind the large number of medical men using cars for their professional work. Have these pioneers found their investments a success? I am sure the general reply will be in the affirmative. Many a colleague has told me that he has added to his practice and also gained in health by the use of an automobile. Of course, some men in the early days have had unfortunate experiences, but many have had equally unfortunate luck with a horse. A horse-dealer may let one in for a diseased quadruped as well as the motor dealer for a car that always breaks down. I admit there are such cars, but with a little foresight and care these pathological automobiles may be avoided. This is the time when the question of the purchase of a car comes to the fore and the great point is, shall it be a new or a second-hand one? The motor papers, such as the *Motor Car Journal* and the *Automotor*, are consulted and then, in truth, confusion thrills the novice. What a number of makes! what an endless crowd of perfect second-hand cars! Everyone seems to be giving his machine away merely because he has no room for it, having bought a more powerful one! The bait is very tempting, but still real bargains can be had at times as well as perfect masterpieces of collected examples of morbid parts. Yet these latter have their use: they assist in one's automobile education—as well as teaching patience. Those electing to buy a second-hand car should visit one or more of the emporiums to be found detailed in the motoring and other papers, where all sorts of machines can be seen, and on certain days most have auction sales. Which is the most suitable car? Well, this depends, of course, on the purse of the would-be motorist and on the work he proposes to do with it. The beginner should start in a small way. A little two-seater with a Cape-cart hood and a front wind-shield can always be had for very little, and the medical man with the aid of a lad can well look after such a car himself, and later, when he has mastered it, he can consider a car with a tonneau in which the annual holiday with wife and family can be spent. Of course, if money is no object, a new car can be bought and a chauffeur employed, but this means putting down some £300 and also £3 to £4 a week for man and upkeep, and even then there may be breakdowns.

After over eight years of motoring and tinkering with cars I strongly feel that a medical man cannot do better than start with a second-hand cheap little car, which he should look after himself. The cars to choose from are legion—Wolseley, Rover, Humber, Darracq, Cadillac, De Dion, &c. These are all good, simple to manage, light on tyres, and in every way suitable for town or country professional use. The paint and upholstery are secondary matters. A little putty and a coat of varnish are cheap and should not influence the sale. The real points are the engine and the transmission gear. If they are worn the car is dear at any price, as such a "bargain" means worry, frequent breakdowns, and heavy expense. On thinking of a car, firstly inspect the tyres, look at the covers for cuts, and if you have time remove or get removed one of the inner tubes to see if it is worn or much patched. Then run the engine and listen for a knocking sound, which suggests wear at the gudgeon—that is, where the connecting-rod is fitted to the piston. Inspect the two-to-one pinions and if the teeth are much worn it will prove at once that the car has had great wear. Get the gear-box cover removed and see if the gears mesh evenly, and if they show signs of wear feel the motion shafts in the gear-box for play in their respective bearings. Cars with worn pinions and shafts with play are not worth considering. Get the seller to give you a trial run of some 30 miles and take the car up a few long hills. If the engine heats badly it is a poor sign, suggesting either defect in the water circulation, leakage at the valves or combustion head-joint (if there is a joint there), poor ignition, run down accumulators or fouled sparking plug points, carburettor defect from either too rich or too poor a mixture, or some inefficient lubrication or a worn or fired bearing in the transmission gear. Some of these defects are trivial, others serious. But a dealer giving a trial run will without doubt have previously tested the car and if the cause of the overheating was curable he will have treated the complaint. So if a car on a trial run overheats it can be taken as a bad sign and should anyway suggest an investigation into the cause. A run-down accumulator or a leaky valve or a block in a lubricator pipe are mere details which can easily be rectified, as can also a flooded carburettor or a sooted plug, but a fired bearing or a worn bevel are more serious troubles which may mean considerable expense to cure. If the price is low and the car takes your fancy, well, let the seller have a chance to treat the defect and arrange for another trial run, but if then overheating still takes place I should advise letting someone else have the "bargain" with its possible problems and motor educational advantages. As to the body most suitable, I strongly advocate a two-seater with a Cape-cart hood and a front wind shield. This latter can be of glass, but then there is always the danger of cuts from broken glass if an accident occurs, so I advise instead of a glass a curtain with a mica or celluloid window; when not required this can be rolled up and if rain comes on it takes but a moment to let it down. These hoods, too, are cheap and easily fitted and can be had from most coach builders.

The electric carriage is unquestionably an ideal carriage for town use. Its silence, absence of vibration, and noiselessness appeal to everyone, and the peaceful gliding motion strikes the eye of the Londoner as he walks through the streets. Until recently the electric carriage has been considered an expensive luxury—perfectly delightful for those whose incomes have an elasticity which covers all that the heart can desire, but quite out of reach of the professional man whose income is limited. The Electromobile Company, of 7, Hertford-street, London, W., has recently issued a tariff which appears to dissipate this view, and its terms seem to give very good value for the money expended and to be well worth the consideration of active professional men to whom time is money and comfort a saving of strength. The company places an electric carriage at the disposal of a client for two hours for the sum of 11*s*., and 5*s*. per hour additional. The fact that the carriage can be obtained at any time of the night or day is also worth noting. It may be useful to add that the company has at its Hertford-street depôt, and always ready for use, an electric ambulance similar to the one which it built for the Corporation of the City of London. This ambulance can be hired for surgical cases on reasonable terms, which, of course, vary according to time and distance. For use within six miles of Charing Cross a fee of 2 guineas is charged, which covers the service of both driver and attendant. I think the existence of this ambulance

deserves to be widely known and I feel sure it will be appreciated by many medical men who wish to have patients comfortably and safely moved from one place to another.

In the early days of motoring solid tyres were the rule, but they were expensive. True, delays from puncture did not occur, but stoppages due to jar to machinery or to broken bevels, fractured differential sleeves, or bent motion shafts were frequent, and they did not admit of such speedy cure as a punctured inner tube. Of course, tyre troubles are a worry, especially to a medical man in a hurry to reach a case, and even if he does know how to put in a new tube it is rather disastrous to clothing and does not add to the appearance of a sick-bed visitor. Pneumatic tyres, therefore, being practically conceded to be an absolute necessity, I can from experience welcome the invention of two Llanelly gentlemen called the "Stepney Spare Motor Wheel." This wheel should always be carried with the cover and tube pumped hard ready for immediate use. Directly a puncture or burst occurs all that is needed is to jack up the car till the deflated tyre is well off the ground, then place the Stepney wheel alongside the car wheel with the fixed clips uppermost and the adjustable ones downwards, the fixed clips inside the uppermost edge of the rim, as far as possible from the security bolts and valve, and then keeping the wheel pressed against the car wheel it is fixed by tightening the fly nuts. Usually little metal bands are supplied to place round the spokes so as to prevent the clips injuring them, but they are not absolutely necessary. A modification of the original wheel has been introduced which is called "The Combination Stepney Wheel," and on cars with different-sized front and back wheels it obviates the need of carrying two Stepney wheels, as by means of four adjustable hooks the one wheel can be adjusted to run alongside different-sized car wheels. A friend of mine recently did a journey of over 100 miles with one of these wheels without damaging the deflated tyre, which was left *in situ* on the car wheel. The chief objection to motoring for medical men was without question the danger of tyre damage, and the advent of this wheel has certainly removed this, as now, if a tyre does puncture, a Stepney wheel can be fixed in less than two minutes and the journey continued. But speaking of tyre worries recalls the marvellous difference in luck which various car owners seem to have with their tyres. One man seldom goes for a run without a tyre stop; another on the same kind of road and with a similar car is not troubled once in six months. "It's not the tyre, it's the man who looks after it." Keep the inner tube fully inflated, put chalk between it and the cover, keep the rims free from rust and grease, fill in all holes or cuts in the outer cover with either Pneu-cure or Vulcan stopping and so prevent admission of damp to the canvas lining. If these points are attended to and the wheels are kept in alignment and the clutch is not fierce, an ordinary Continental or Dunlop tyre should easily do 7000 or 8000 miles without a puncture and last perhaps for double that distance. The great thing is, keep the tyre fully inflated.

Soon that annual pleasant duty to the State of making the income-tax return will be here and those using motor-cars for professional purposes will claim an allowance for depreciation. The life of a car varies, but still I think 15 per cent. would not be an unreasonable amount to claim. I fear the Revenue authorities have a high opinion of the modern car; anyway, it appears that they object to grant more than 10 per cent. This is certainly unjust, for anyone who has tried to dispose of a second-hand car knows that if at the end of a year he gets two-thirds of what he gave for it he is lucky. Only recently I had a perfect-running four-year-old car offered me at one-sixth of its cost price. So certainly 15 per cent. should be claimed and allowed.

BRITISH MEDICAL BENEVOLENT FUND.

THE following is the report of this charity for 1907, which, as was reported in the last issue of THE LANCET, was adopted at the general meeting of the subscribers held on Feb. 18th:—

The most important event in the history of the past year is the lamented death of our President, Sir William Broadbent. This is a very serious loss to the Fund. As secretary, treasurer, and president, Sir William Broadbent had given many years of hard work to the Fund. He had not only contributed largely of his own resources and been the means of securing wide support from others, but, assisted by his daughter, had taken that personal interest in the recipients of relief which made the charity given doubly welcome. To the sense of public loss must be added that of individual bereavement and the committee feels his death as that of a personal friend, for his house had been for many years its home and there all its meetings were held. Altogether his great influence will be terribly missed.

In his place Sir John Tweedy, another devoted friend of the Fund, has been elected as President. Under his active direction the Fund may well look with confidence to the future.

The finances have unfortunately shared in the general depression.

In the grant department the amount received has been less by £143 5*s.* 1*d.* than that in 1906, but about the same as in 1905. The year 1906 showed receipts much above the average because of the special appeal, as a result of which a certain sum was placed on deposit. This had to be drawn upon to meet the demands of the current year to the extent of nearly £300; for the sum of £1861 8*s.* was distributed in grants during 1907 compared with £1567 15*s.* in 1906. The demands have been unusually great and the Fund has done its best to meet them, but it will not stand repeated drains of this kind, and it is imperative that every effort should be made in the coming year to increase its resources.

The annuity department continues to be satisfactory, for as the result of the policy of investing all legacies, the capital continually grows and the income available for annuities increases. £1500 of Metropolitan Police Stock has been purchased this year, yielding £45 per annum. The annuities number 123 and are for the most part of the value of £20 per annum. Some years ago a special fund was started with the object of raising all the annuities to £26 per annum, or 10*s.* a week. The special fund now amounts to £2400. Of recent years this fund has to some extent fallen out of view and little has been added to it. The committee wishes to draw attention anew to its existence and is resolved to take any opportunity that presents itself of increasing it so that all annuities shall reach the desired value; for 10*s.* a week is little enough, especially to those who, like so many of our annuitants, have in earlier life been in comfortable circumstances. To raise all the remaining annuities to this amount of 10*s.* a week would require over £600 per annum, or a capital sum at 3 per cent. of more than £20,000. What a grand opportunity for the truest charity is thus open to the benevolent.

The following is the list of donors of £10 and upwards during the year:—

	£	*s.*	*d.*
The Society of Apothecaries	10	10	0
British Medical Association, Exeter meeting; Church collection ...	21	8	3
Miss Flower—special gifts...	15	0	0
Dr. Frank	25	0	0
Great Western Railway Medical Staff	10	0	0
Mrs. Hawkins...	10	0	0
H. Rooke Ley, Esq., M.R.C.S.	15	0	0
Liverpool Church Collection—St. Luke's Day	25	0	0
Sir R. Douglas Powell, Bart., M.D.	10	0	0
The Salters' Company...	10	10	0
Dr. Satchell, J.P., F.R.C.P. Edin.	21	0	0
Sir Thomas Smith, Bart., F.R.C.S.	10	0	0
Sir John Tweedy, F.R.C.S.	50	0	0
Dr. Uhthoff	10	0	0
Dr. H. H. Weir	25	0	0
F. E. Webb, Esq., M.R.C.S.	100	0	

Mr. John Terry, M.R.C.S., of Braunston, Rugby, and Dr. H. G. Harris of Southampton have been appointed new hon. local secretaries.

The committee received with regret the resignation of Dr. Wade of Southampton, who for many years did valuable work for the Fund.

The accounts have been audited as usual by Messrs. Delottte, Plender, Griffiths, and Co., the auditors of the Fund, whose services rendered gratuitously for so many years the committee desires to acknowledge with warm appreciation.

To THE LANCET and the *British Medical Journal* the committee expresses its warmest thanks. The insertion month by month of a short abstract of the cases relieved is the best and most touching appeal that can be made and is one of the most effectual means of keeping the work and requirements of the Fund before the profession.

Death has laid a heavy hand upon our members and besides our President has carried off Mr. J. N. Winter, V.P., donor of £1290; Dr. A. K. Sansom, annual subscriber of £21; Dr. Alfred Sheen, hon. local secretary for Cardiff, who collected £785 2*s.* 6*d.*; as well as Dr. R. Markham Skerritt, V.P., Sir William Tennant Gairdner, K.C.B., V.P., Mr. Timothy Holmes, F.R.C.S., V.P., and Sir Alfred Garrod, M.D., all of whom were liberal subscribers. Mr. Winter was for many years an active member of the committee and rarely missed its meetings. Besides being a constant and liberal contributor he was always ready in various ways to give help wherever and whenever it was needed.

To make good all these serious losses renewed and increased effort will be necessary if the Fund is not to fall behind in the good work it is doing. Every opportunity should be taken of making the objects and work of the Fund more widely known. For the better known it is the more, without doubt, it will be appreciated and supported.

MEDICINE AND THE LAW.

Notification of Births Act, 1907.

THE medical officer of health of Kensington has issued the following summary of the provisions of Section 1 of this Act: "The 'duty' of notifying a birth to the medical officer of health devolves," he says, "in the first instance, upon the *father* of the child, if he be living in the house at the time of the occurrence of the birth, and if not, then upon 'any person in attendance upon the mother at the time of, or within six hours after, the birth.' The notice must be 'given by posting a prepaid letter or prepaid postcard ..... within 36 hours after the birth,' or by delivering a 'written notice of the birth at the office or residence of the medical officer within the same time.' The notification is in addition

to, and not in substitution for, the requirements of any Act 'relating to the registration of births,' and it applies to any child born 'after the expiration of the twenty-eighth week of pregnancy, whether alive or dead.' Liability to a penalty not exceeding 20*s.* is incurred by any person who fails to give notice of a birth in accordance with the Act." The wording of the Act seems, however, to imply that the medical man's notification is required in addition to that of the parent, and we regret that we cannot quite agree with the interpretation placed upon this Act by the medical officer of health of Kensington. In our view the duty of notifying a birth devolves upon the father "if he is actually residing in the house where the birth takes place at the time of its occurrence," but it also seems to be the duty of "any person in attendance upon the mother at the time of, or within six hours after, the birth"—we take this to mean professional attendance—to satisfy himself or herself that this duty has been performed and if there is any doubt upon the matter to notify the medical officer of health of the birth. It seems therefore necessary for any medical practitioner or midwife in attendance (as defined by the Act) to be satisfied that the requirement of the Act has been complied with and therefore in all cases of doubt a medical practitioner would act prudently in sending the prescribed postcard. By subsection (2) of Section I. any local authority adopting the Act must supply without charge addressed and stamped postcards for this purpose to any medical practitioner or midwife who applies for them. The medical officer of health of Kensington rightly refers to the twenty shilling penalty but omits to set out the proviso, "that a person shall not be liable to a penalty ..... if he satisfies the court that he had reasonable grounds to believe that the notice had been duly given by some other person."

ALLEGED CASE OF COCAINE POISONING AT SLOUGH.

CONSIDERABLE interest was shown by the medical profession in the adjourned inquest on the body of Mrs. Margaret Edith Weston, a married woman, aged 36 years, who died at The Cedars, Slough (the residence of Mrs. Buée), on Thursday, Feb. 20th. From the evidence given Monday week it will be remembered that deceased was taken ill on Wednesday, Feb. 12th, and Dr. R. S. Charsley was called in. He alleged that there were symptoms of cocaine poisoning and at the death of deceased on the 20th he refused to give a certificate, hence the necessity of the inquest. The inquiry was ultimately adjourned for a week, on the application of the jury, in order that a post-mortem examination might be made and an analysis of the stomach. Mr. J. BAILEY GIBSON, the deputy coroner for South Bucks, again conducted the proceedings.

The CORONER said before taking any evidence he would like to say that he had been more or less inundated with letters from doctors, medical associations, and, in fact, from several sources. He did not know whether any of the jury had received any, but it was his duty to direct them if they had to dismiss any statement contained therein and to remember that their verdict must be given solely on the evidence before them. Some of the statements received were most improper and ought not to have been sent to any official.

Dr. CHARSLEY said there was one small matter with reference to his evidence he would like to amend or correct as it had appeared in print. He thought the coroner mistook the time when he saw the patient before, and rather censured him for not taking more care about preventing her using this inhaler so often. May 7th last year was the last time he saw her professionally so that she had been using it nine months independent of his direction or care.

The CORONER: I don't think you can say I censured you.

Dr. CHARSLEY: You said you wondered I did not knock it off. I did my best to warn her about it and I did not know the actual constituents of the liquid inhaled—it was only the last week or two that the actual constituents were known—so that I do not feel that I am to blame in the matter.

The CORONER then read the evidence of Dr. Charsley on this point.

Dr. WILLIAM FLECK, a registered surgeon of High Wycombe, said on Feb. 25th he made a post-mortem examination.

The CORONER: Will you tell the jury what parts you examined and the results of your examination?

WITNESS: I found the body fairly well nourished and not emaciated. On examining the contents of the thorax, which I did first, I found the heart healthy. The lungs showed evidence of having had bronchitis and pneumonia on the left side—bronchial pneumonia, in fact. There was extensive adhesion between the left lung and the chest wall, showing some old attack of pleurisy, which would help further to disable the lung. Both lungs were emphysematous. The liver was healthy but somewhat above the normal size. The spleen and kidneys were in a healthy condition. I removed the stomach and sent it to the county analyst and a portion of the bowel. The remainder of the bowel I examined and found in a healthy condition. I then examined the brain and found it in a healthy condition, and I took certain portions of the organs and had them sent to the county analyst, Mr. Fisher.

The CORONER: And that roughly is the result of your examination?—Yes.

On that result was there anything, so far as you could say, to cause death?—The condition of the lungs, I consider, was quite sufficient to cause death.

From bronchial pneumonia?—Yes. I should say that in cutting through the left lung there was a muco-purulent discharge—a foul greyish discharge mixed with a little blood.

What is the mucus indicative of?—Bronchitis and some pneumonia.

So far as you can say, there was no trace of poison of any sort?—Nothing I could observe.

A suggestion was made in the evidence given that the heart was weak; you say it was healthy?—There was no organic or valvular disease. At the same time the heart might be weak and very likely this would be owing to bronchitis and asthma from which she suffered.

Mr. FULLBROOK (a juror): Are we to understand that the heart was perfectly healthy but weak in its action?

Dr. CHARSLEY: The right lung did show signs of having had bronchitis?—There was evidence of bronchitis there.

What sort of secretion was there in the right lung?—Mucus.

Was it frothy or solid?—More frothy than solid.

In the left lung you say there was a patch of pneumonia?—Yes.

Was it extensive?—The lower part of the lung chiefly.

It was affected in patches?—Yes.

The lung was not solid in any way?—It was not solid.

It was more lobular than lobar?—Yes.

Is that a fatal disease in adults?—I should say it is always a dangerous disease; I have had many cases of recovery from it.

You would expect to get a recovery in an adult from bronchitis?—Yes; but in pneumonia you are never sure what course will be followed.

Here you have one lung and a half perfectly able to continue their function, the air entering freely?—Not so completely as in healthy organs.

Sufficient to support life?—Yes, they might support life.

There was only half of one lung seriously affected?—Yes.

What about the heart. You say it was healthy, did you weigh it?—Yes.

What was the weight?—Slightly over the normal weight, not much; 10 ounces.

Showing that it had a little extra work to do in life?—Yes.

Can you account at all for the beginning of this illness which began with syncope?—Well, I think that is the usual course of bronchial pneumonia—failure of the heart.

At the beginning of an attack?—Certainly not at the beginning. Failure of the heart is a natural sequence from bronchial pneumonia. A patient principally dies from heart paralysis, which might be accelerated from other causes, of course.

Dr. CHARSLEY: It was stated that the lady was perfectly well on Tuesday and on Wednesday morning was only slightly unwell and would not send for a doctor as she thought it unnecessary.

The CORONER: Which Wednesday?

Dr. CHARSLEY: Wednesday, Feb. 12th, and eight days before she died from heart failure. I ask the doctor whether he would not be surprised to know that this was a fact?—WITNESS: Oh no, that is quite consistent with the condition of the lungs; if she was taken ill on the Wednesday and

died on the following Thursday week it gives ample time for the disease to develop.

I would like to ask if these minute patches of bronchial pneumonia are easy to detect?—They are not.

When supported by adhesion is it not almost impossible?—It is very difficult indeed.

The right lung was capable of carrying on life?—Yes.

That is important, I think, to go down.

The CORONER: I am quite capable of knowing what to take down.

Dr. CHARSLEY: I apologise if I am wrong; I thought you did not hear it. To Witness: Would you expect to find in the case of a fairly well-nourished woman more or less acute syncope at the beginning of illness without anything to cause it?—Not at the beginning of illness.

Not the first day to find the heart bad?—No, I would not. I do not think there was all this pneumonia eight or nine days before her death.

If there was syncope on the first day you would consider it your duty to ascertain what caused it?—Quite.

This syncopic condition would be still more astonishing if it continued two or three days and the patient got better under strychnia and then got worse?—Yes.

A suggestion was made, what do you think of it, that this syncopic condition might be due to influenza?—The illness would have been longer.

Would the patient have been ill much longer if the syncope was due to influenza?—Yes.

Are you aware of the effects of cocaine if taken continuously?—Yes.

What are the effects?—It is faintness and giddiness; the use of cocaine produces a depressant action on the heart.

The continuous use of cocaine?—Yes, or a single dose; the continuous use of fairly large quantities is worse.

Or fairly small quantities?—Yes.

Is sleeplessness one of the characteristics of continued use of cocaine?—Yes, it is likely.

Do you know it is one of the recognised symptoms of chronic cocaine poisoning?—Yes.

You would be surprised if you attended a patient who did not sleep for six or eight days except with the aid of drugs?—Yes.

Do you know anything of this inhaler?—I know more about it since THE LANCET case.

Do you know it contains powerful drugs?—I don't know the quantities.

Do you know there is a considerable quantity of nitrite of soda and that this is a dangerous——

The CORONER: We have not heard of nitrite of soda before.

Do you know what is the maximum dose of atropine allowed by the British Pharmacopœia?—I know it is infinitesimally small, but I cannot say now.

Would you accept a statement of Dr. Hale White?—I know it is very small.

One hundredth of a grain is the maximum dose allowed, and if in one ounce there are a hundred maximum doses do you not think it is a very dangerous fluid to be in the hands of the public?—Certainly.

Do you know as a matter of fact that there is a general increase in the drug habit?

The CORONER: That does not quite bear on this case.

Mr. REYNOLDS (representing the family): This illness started nine days before death.

The temperature and sickness, is that consistent with your evidence?—It is.

Entirely?—Entirely. May I ask what the temperature was?

Dr. CHARSLEY: It varied about 101.

WITNESS: That would be consistent.

Mr. REYNOLDS: Could the temperature and sickness be produced by the poison?—Not the temperature; possibly the sickness might.

Would the poison affect the system?—There is generally after taking a dose of cocaine a very violent flushing; if taken in large quantities it would not raise the temperature; I think it would rather lower it.

It would lower the temperature?—It would be more likely, I think.

Did you find any signs of asthma?—There is nothing to indicate it by the examination. Asthma is a spasm; there is no particular organic change; it is a spasmodic disease.

You said the heart was larger?—Slightly larger.

Would that be produced by six years of asthma?—It might be with bronchitis.

You said there was adhesion of the lungs showing pleurisy. How long ago would that have been?—It is impossible to say. It is of old standing, probably for many years.

You said failure of the heart was a natural sequence of bronchial pneumonia. That would be intensified by six years of asthma?—It would be.

Dr. Charsley in his evidence said if poison was taken for a long time it would cause indigestion?—If it does nothing worse it would not be much of a poison.

Dr. CHARSLEY: I might have mentioned it as a chronic condition.

Mr. REYNOLDS: Was there anything wrong with the digestive organs?—I did not examine the stomach; that was sent to the analyst and he will be able to tell you. I did not interfere with that at all.

This lady had a weak heart for many years; is it not perfectly possible that she died from the effects of this bronchial pneumonia?—It is quite possible. It is a thing that is happening every day. I should imagine it is the duty of the doctor attending a case of pneumonia or bronchial pneumonia to get the heart in as good a condition as it is possible to get it. Everything depends on that. If the heart is allowed to fail there is not much chance for the patient. Strychnine, brandy, and other things are used to keep the heart going until the crisis is over. Every doctor considers that his first duty. If the heart fails there is not much chance.

Do you consider it likely this lady died from poisoning seeing that the acute stage had passed eight days before death and that she had no poison after? I will put it this way. A person would be far more likely to die from poisoning during the acute stage?—Of course, if she had a large dose of the poison, but if infinitesimal small doses were continued for years no doubt it would have a weakening influence on her and on her heart particularly.

The CORONER: If taken consistently for years?—If taken constantly—regularly—I should say it would decidedly lessen her chance of recovery.

Dr. Charsley said the patient appeared to be susceptible to the action of cocaine. If so, do you think she would suffer any ill-effects if she had a tooth extracted under cocaine by a dentist?

The CORONER: There is no evidence that it did have any effect.

Mr. REYNOLDS: It was said she was susceptible to cocaine and she went to the dentist a fortnight before death.

WITNESS: Everyone is susceptible to cocaine.

Some more or less?—Yes; I agree it is a strong poison, but the small dose frequently given with the extraction of a tooth is a different thing from having it each day.

If they are susceptible to it?—That depends upon the dose. If she had the minimum dose it would only act as an anæsthetic and numb the part injected. A fifth of a grain is the smallest dose and I don't think the effects of this on any person would be very much. I myself have injected as much as half a grain, but I have not often done that.

What in your opinion is the cause of death?—Well, judging from the facts before me—I did not know anything about the quantity of cocaine inhaled or how long the inhaler had been used—if I had known nothing about it my opinion would be that death was due to bronchial pneumonia—paralysis of the heart from bronchial pneumonia. I am not supposed to know anything about cocaine poisoning. My duty was to examine the body and tell you what I found there.

The CORONER: There is only one question, would it be correct to state that the patient died from cocaine poisoning?

Dr. CHARSLEY: That has never been stated.

The CORONER: I am only asking the question.

WITNESS: I could not say that from any evidence I have heard.

From your examination?—Certainly not from my examination.

Mr. REYNOLDS: If she had died would you expect to have found any signs?—Not from my examination. It is just possible—I am not very sure of what I am saying—that congestion of the brain is a likely thing to appear. Of course there was none of that.

Dr. CHARSLEY: I should like Dr. Fleck to say whether he thought, if he had known cocaine had been taken continuously for some time, it would not be likely to cause that injury to the heart and hasten death; not necessarily death from cocaine poisoning but death hastened by cocaine, if he had known it was taken more or less continuously for two years?

The CORONER: Would that have made any difference?

WITNESS: Decidedly; I should say it would be a very strong factor to hasten death. Habitual asthma and constant taking of cocaine would make her an easier victim to bronchial pneumonia, I have no doubt about that.

If you had known for two years that she was using this inhaler which contained cocaine and if you had known she had a weak heart what would you have done?—I should have recommended her not to take it.

Not at all?—Medical men generally are of opinion that cocaine should not be taken by a patient except under the supervision of a doctor. It is too powerful a poison to trust it in the hands of any person outside the profession.

Mr. FULLBROOK: I think I understand you to say that a weak heart is largely caused by asthma and bronchitis?—That is quite correct.

You said asthma was more a spasm than anything else?—There is such a thing as heart asthma which arises from a weak heart and another form which arises from bronchitis.

It struck me that this lady was led to believe that this inhaler was the finest remedy for asthma and yet with a weak heart it injures the heart?—The remedy is worse than the disease.

Is it not a fact that the Pharmaceutical Society is charged with the duty of prosecuting unauthorised vendors of poisons?

The CORONER: We are not here to discuss that.

Mr. FULLBROOK continued to put other questions but was stopped by the coroner, who said his task was quite difficult enough without going into extraneous matters.

Sergeant FIELD proved conveying the contents of the stomach to Mr. Fisher's chemistry department at the University Museum at Oxford and handing them over to Mr. Lambert who gave the receipt produced.

Mr. WALTER WILLIAM FISHER, a Fellow of the Institute of Chemistry and public analyst for the county of Buckinghamshire, stated that on Feb. 26th he received the box from Sergeant Field, the coroner's officer, containing three glass jars securely corked and sealed: (1) containing the stomach and part of the intestines; (2) a portion of the lungs; and (3) the spleen and part of the brain. The stomach was practically empty. On opening about an ounce of fluid and mucus was found. Nothing abnormal was seen. The stomach and contents were examined for various poisonous substances and no indication of prussic acid, chloral, arsenic, strychnine, or vegetable alkaloid poisons was obtained, and no cocaine was found. The analysis, in fact, gave entirely negative results. The lung was dark and apparently congested in parts, but some of the discolouration was doubtless from post-mortem change. After extraction no indication of the presence of cocaine was obtained. No analysis was possible of the spleen or brain, as the time was too short to allow of it, but in view of the negative result from the other organs no other result was probable in these also. His examination therefore did not explain the cause of death as no poison could be detected. The analysis, however, was so far useful that it disposed of any suspicion that death was caused by any poison being actually swallowed. He could give no opinion of his own knowledge as to the physiological effects of cocaine taken into the nose as it would be from a spraying machine.

The CORONER: I think you state that there are no characteristic signs of cocaine poisoning after death?—No characteristic signs of cocaine poisoning after death.

Dr. CHARSLEY: Would you expect to find cocaine poisoning by your analysis?—No; the only chance to find cocaine would be if it had been taken quite recently.

And the patient died almost immediately?—Yes.

Are you aware that up to a few weeks ago the analysis of this fluid was not known?—I never heard of it.

The CORONER: I don't think the witness can prove that.

WITNESS: I only know what I read in the journals.

Mr. AUGUSTUS QUACKENBUSH TUCKER of Herne Hill, London, was the next witness.

The CORONER: What do you describe yourself as?

WITNESS: I am a vendor of Dr. Tucker's asthma specific.

Dr. Tucker is your brother, I think?—He is.

Where does he live?—In the United States of America.

I think this fluid and the inhaler is made by him and not by you?—The fluid is made by him.

Is the inhaler made by you or your brother?—He has it made in Boston, in the States.

How long have you been selling these things, roughly?—It is seven years last August since I commenced in England.

And about how many people have you got on your books using them now?—Upwards of 25,000.

Do you keep proper books of every inhaler that goes out and the amount sent with it?—We have the name of every person who purchases a remedy and their full address.

Will you tell us what an order consists of, your recognised order?—It consists of an atomiser and four ounces of fluid.

Is it all sent straight away?—It is.

All at once?—No, in the British Kingdom a two weeks' trial before any purchase is made is given to every patient.

Yes, and then I presume they pay for them?—They either pay for them or return them.

In the case of a person paying for it what happens?—We send them two ounces of the fluid usually.

What goes with the original?—We send the instrument at the start with a sample of the fluid for trial.

About how much?—About a quarter of an ounce, or perhaps nearer half an ounce.

Then the thing is paid for?—We then send usually up to two ounces.

And you keep a record of how the four ounces are sent?—Yes; the other two ounces we send to order.

Have you got your books here?—I have.

You produce these books which are used in your office?—This is one of the 27 books; it contains the names of all those commencing with "W."

This is in common use in your office?—Yes, daily use. In the ledger the entry is made "Sept. 15/05. Mrs. Margaret Weston, 7, Curzon St., Slough, Bucks, paid £3; sent one ounce of fluid." "Feb. 2, 1906, sent one ounce of fluid." On Oct. 3rd, 1906, we sent the balance, two ounces.

Can you from your knowledge say whether any has been had since?—I have examined very carefully our books and find no trace that any has been sent her since Oct. 3rd, 1906.

What is the average time you find amongst your patients for using one ounce of fluid?—The average is about three months.

I think about a quarter or half ounce was sent with the instrument originally?—Yes.

Can you tell the exact date when this was sent on approval?—It is usually about two weeks previous to the time of making the payment. I suppose that would be about right in this case.

Suppose we take it from Sept. 15th, when the first ounce was sent, until Feb. 2nd, 1906, when the second ounce was sent, that would be about five months?—Yes.

That is rather less than the average?—Yes, the average is about three months.

In all she had four ounces in nearly two and a half years?—Yes, less than half the usual amount.

Can you say how much is left there?—There is more than we usually send for a trial, nearly twice as much.

Do you say three-quarters of an ounce?—Probably about half an ounce.

The fluid is sent separate either in one or two ounce bottles, not in the atomiser?—No, except what is sent for trial.

Dr. CHARSLEY: Are you aware that Mrs. Weston's mother provided her first with the inhaler and this stuff?—I don't know that.

The CORONER: There has been no suggestion of that.

Dr. CHARSLEY: I only asked the question. (To witness) Do you always keep a record of all the people to whom you supply this?—Every one.

Do you remember a man named George Waldock on Jan. 22nd last purchasing a sample?—He got fluid only.

The CORONER: It is not our duty to go into that.

WITNESS: He got fluid only and not an instrument.

The Coroner asked if you kept a record of the fluid sold—Of persons using our remedy. If anyone calls we expect he is a patient of ours, and we supply to our old patients whenever they call.

And Mrs. Weston might have called quite easily?—She might have.

You have no record?—I did not look through the cash account, but I know it was not sent by mail.

Mr. REYNOLDS: Have you had any complaints from any of the 25,000 people of ill-effects received from using this inhaler?—I have never had a positive complaint. Different questions have been asked if the remedy could produce certain effects. One man, a doctor, who used it for a long time suggested the idea that it might have loosened his hair as it had all come off. (Laughter.)

He lost his hair?—Yes; I was not sure whether he was in

earnest or joking. He is still using it and has been ever since, but I never knew of any serious charge ever laid against it. We have 60,000 people on our books in the States and over 25,000 here, and I have never known of a solitary case of the slightest injury resulting from the use of it. I am one who has used more of it than any person in the British Kingdom. I am using it constantly. I suppose I use an ounce of that fluid every month and have been for 17 years.

The CORONER: I suppose you have not got a weak heart?—Not now; but 20 years ago I had an exceedingly weak heart. I could not lay on my left side or walk except a few roods. That was the result of overwork, over exhaustion, and the use of tobacco. I quitted both and commenced using this 17 years ago, and now I am a pretty good man for my age. My heart is not strong now but it is fairly good.

You think it improved your heart?—Yes, because it improved my breathing. If a man can't breathe his heart is going to be seriously affected.

Mr. FULLBROOK: Is it not a fact that you yourself did not know the constituent parts of this fluid?—I don't know of my own personal knowledge.

You admit the analysis is correct?—I do not know. I admit the specific in the inhaler because I have tried it. I can tell by the smell of it; I have used it so often.

If the instrument gets out of order is not the stuff likely to be injurious?—No, sir; if it got out of order and produced a spray instead of the vapour it would not get any further than this part of the nose.

One of your own witnesses in the recent case said if it did not spray it would be injurious?—I don't think you can find that in the record.

The CORONER: You objected to this case being mentioned last week.

Mr. FULLBROOK: It was brought forward and I think I was justified in asking the question. I understood that if the vaporiser did not work it was more injurious.

Mr. TUCKER: I should like to say that there is a vapour and it is so fine that you cannot see it on this piece of paper, which is still dry after I have used the instrument. If it was out of order and there was a spray that gets no further than the nostril and would not get into the lungs at all.

The CORONER said he did not want a lot of questions asked which had no bearing on the case. The jury only had to consider the points which had anything to do with the case and their verdict must be on the evidence.

Mr. FULLBROOK: In the event of you supplying this stuff to a person who used it in an instrument which did not act properly would it not then be injurious?

WITNESS: No, I think not. If the atomiser is out of order it does not produce the vapour but a spray. It would not be inhaled at all and would not go further than the nostril from a spray. It would run back out of the nostril and do no injury as it would not be inhaled.

Mr. BRADFIELD (a juror): There is nothing to prevent a patient receiving a two-ounce bottle from taking a dose without inhaling it.

The CORONER: There is not the slightest evidence of that. Mr. Fisher tells you there is proof that it was not swallowed.

WITNESS: The bottle containing the specific has the name of Dr. Tucker printed on the glass and it is not very likely people would drink it. I have never heard of a case. One clergyman in Chicago did take what he supposed to be a teaspoonful. He was quite frightened and his family physician telegraphed to my brother asking him if he knew of any antidote. Before the reply came he was feeling so comfortable that he took nothing. That was the only case I have ever known. This happened where the gentleman had two bottles of medicine in his pocket of about the same size and he carelessly took one of them and had a dose not noticing it.

Mr. FULLBROOK: Do you supply the Australian market from England or does your brother?—I do most of it. He commenced before I sent and he occasionally sends to Australia and New Zealand, but most I send from here.

For the Australian market have you to label this bottle poison?—WITNESS was understood to reply: It is never marked at all any more than it is marked here.

The CORONER said it was for the jury to consider, having heard the evidence of Dr. Fleck as to the post-mortem examination, and after hearing Dr. Fisher on his analysis, coupled with the evidence given before and to-day, whether they thought they could ascribe death as due to what Dr. Fleck called bronchial pneumonia, or whether they thought there was any other cause of death. If this was what they considered death to be due to they had to consider whether such death was accelerated by cocaine poisoning. If they did think so then the verdict should be accordingly. It was for them to consider whether they thought such use of the cocaine through the asthma inhaler was too remote to have caused any reason for bringing on bronchitis or weakening the patient. He thought they must base their decision entirely on the doctor's evidence.

The room was then cleared whilst the jury deliberated, and after about 20 minutes the medical gentlemen and the press were admitted, when the CORONER read out the verdict. This was to the effect that deceased died from natural causes and that the cause of death was paralysis of the heart following on bronchial pneumonia.

The CORONER added that he would like to thank the jurors for the very close attention they had given to the inquest both at the opening and also the adjourned proceedings.

Looking Back.

FROM

THE LANCET, *SATURDAY*, March 6th, 1830.

REMARKABLE CASE OF HEREDITARY MONSTROSITY.

VICTOIRE BARRE, ætat. 24, of lymphatic constitution and middle stature, was admitted on the 18th of May, 1827, into the obstetric institution of M. Maygrier. Her extremities were peculiarly malformed; instead of hands, she had on each arm one finger only, the other fingers, and their metacarpal bones, with the exception of imperfect rudiments of two of the latter, were entirely wanting; on each foot there were but two toes, apparently the first and fifth, both of which were very defective. The fingers were both bent outwards, and their phalanges were scarcely moveable; the phalango-metacarpal joint, however, admitted of free motion. The great toe of the right foot was without a nail, and bent upwards; its phalanges were anchylosed; the other toe was bent inwards, and perfectly moveable; its metacarpus was apparently formed by the union of several metacarpal bones. The great toe of the left foot had the rudiment of a nail, and was bent inwards; the other toe was like that of the right foot. Between the toes of each foot there was a large fissure, owing to the absence of the other toes and their metacarpal bones, which made them in some respect similar to the claws of a lobster. After a natural labour, she was delivered of a female child, with the following malformation: On each hand, four fingers and three metacarpal bones were wanting; the fifth, which was apparently the little finger, was supported by one metacarpal bone. At the base of each finger there was a small tubercle, formed by the extremity of the other metacarpal bone. Both fingers very much resembled each other, as well as those of the mother, being bent outwards, and almost immoveable in their phalanges. On each foot there was but one toe, with three phalanges, and two metatarsal bones, the interval between which was filled by soft substance. Both toes were bent inwards, and their phalanges had scarcely any motion.

On the 27th of February, 1829, Victoire Barré was again admitted at the above institution, and delivered of a girl with exactly the same deformities. Previous to the birth of these two children, the mother had, in 1825, been delivered of a healthy and regularly-formed male child, which died in his tenth month of small-pox. The father of this boy was not, however, the father of the girls also.

The mother of Vict. Barré was regularly formed, but her father had on each foot the fifth toe only, and on the left hand one finger; the right terminated in a soft, rounded substance. The sister of this individual was deformed in the same manner.—*Essai sur les Monstrosités Humaines. Diss. Inaug.*

F. Meckel, in his Morbid Anatomy, gives some very remarkable instances of hereditary malformation, though principally of the opposite kind, the deformity consisting in the addition of superfluous parts. In one of these cases, "The father had twelve fingers and twelve toes, all of them well formed. Of his four children, Salvator the eldest had the same deformity; in Andrew, George, and Maria, both fingers and toes were natural as to number, but in the latter

somewhat misshapen. Salvator had three sons and a daughter, who, with the exception of one son, had all twelve fingers and toes. George had three daughters and a son, of whom the former only were deformed, two of them having twelve fingers and toes, the third twelve fingers, and six toes on one foot only. Maria had two sons and two daughters, of whom one son only was deformed, having six toes on one foot." In another instance, "A man whose palate was entire, but uneven, as if cicatrised, had, by a perfectly healthy wife, seven children, of whom the four boys were well formed, but the three girls had hare-lip and divided palate. His mother's sister had also seven children, five sons and two daughters, of whom the former were all similarly deformed." Meckel, indeed, observes on this occasion, "I am inclined to believe that, on a careful examination of such cases as these, they would always be found to be in some degree hereditary."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8157 births and 5374 deaths were registered during the week ending Feb. 29th. The mean annual rate of mortality in these towns, which had been equal to 18·6 and 18·4 per 1000 in the two preceding weeks, further declined to 17·3 in the week under notice. During the first nine weeks of the current quarter the annual death-rate in these towns averaged 18·4 per 1000; the rate in London during the same period did not exceed 18·0. The lowest annual death-rates in the 76 towns last week were 9·2 in Northampton, 9·6 in Hornsey, 9·8 in Stockton, and 10·7 in Tottenham; in the other towns the rates ranged upwards to 23·8 in Sunderland, 25·1 in Newport, 26·7 in Oldham, and 27·3 in Brighton. The rate of mortality in London last week did not exceed 16·8 per 1000. The 5374 deaths registered in the 76 towns last week showed a further decline of 352 from the numbers in the two preceding weeks, and included 374 which were referred to the principal epidemic diseases, against 447, 388, and 385 in the three previous weeks; of these, 138 resulted from whooping-cough, 86 from measles, 47 from diphtheria, 47 from diarrhœa, 32 from scarlet fever, and 24 from "fever" (principally enteric), but not one from small-pox. The deaths from these epidemic diseases in the 76 towns were equal to an annual rate of 1·2 per 1000, the rate from the same diseases in London being 0·9. No death from any of these epidemic diseases was registered last week in Nottingham, Southampton, Wolverhampton, Stockport, or in seven other smaller towns; the annual death-rates from these diseases ranged upwards in the other towns to 3·2 in Devonport, 3·3 in Sunderland, 4·7 in Newport, and 5·1 in Reading. The fatal cases of whooping-cough in the 76 towns, which had been 192, 154, and 170 in the three preceding weeks, declined to 138 in the week under notice; the highest death-rates from this disease were 2·2 in Warrington, 2·3 in Sunderland, 2·6 in Devonport, 2·9 in Burton-on-Trent, and 4·1 in Newport. The 86 deaths from measles showed a further slight increase upon recent weekly numbers, and caused the highest death-rates, 1·6 in Rhondda, 1·8 in South Shields, 1·9 in Reading, and 2·9 in Stockton. The deaths referred to diphtheria, which had been 73, 47, and 52 in the three previous weeks, declined again to 47 in the week under notice; the highest proportional mortality from this disease being equal to rates of 1·2 in Gateshead, 1·3 in Norwich, and 1·5 in West Bromwich. The 32 fatal cases of scarlet fever showed a further decline from recent weekly numbers, but were equal to rates of 1·2 in Leyton and 1·3 in King's Norton. The 47 deaths attributed to diarrhœa showed an increase. Of the 24 deaths referred to "fever," which somewhat exceeded the low number in the previous week, four occurred in Birmingham, three in Manchester and Salford, and two both in Portsmouth and Sunderland. The number of scarlet fever patients under treatment in the Metropolitan Asylums and London Fever Hospitals, which had steadily declined in the 12 preceding weeks from 5581 to 3733, had further fallen to 3674 on Feb. 29th; 383 new cases were admitted to these hospitals last week, against 473 and 420 in the two preceding weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had been 451 and 427 in the two previous weeks, declined to 364 in the week under notice, and were but five above the corrected average number in the corresponding week of the five years 1903–07. The deaths in London attributed directly to influenza were last week 141, against numbers increasing from 32 to 128 in the four preceding weeks. The causes of 63, or 1·2 per cent., of the deaths registered in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in London, Leeds, West Ham, Bradford, and in 46 other smaller towns; 11 uncertified causes of deaths were, however, registered in Liverpool, nine in Birmingham, six in Sheffield, five in South Shields, four in Sunderland, and three in St. Helens.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 23·5, 21·4, and 21·8 in the three preceding weeks, declined to 19·2 in the week ending Feb. 29th, but exceeded by 1·9 per 1000 the mean rate during the same period in the 76 large English towns. Among the eight Scotch towns the death-rates ranged from 14·6 in Aberdeen and 16·6 in Leith to 22·5 in Greenock and 27·2 in Dundee. The 677 deaths in these eight towns showed a decline of 90 from the number returned in the previous week, and included 99 which were referred to the principal epidemic diseases, against 132, 114, and 92 in the three preceding weeks; of these, 41 resulted from measles, 18 from whooping-cough, 14 from "fever," eight from diphtheria, 13 from diarrhœa, and five from scarlet fever, but not one from small-pox. These 99 deaths were equal to an annual rate of 2·8 per 1000, which exceeded by no less than 1·6 the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 64, 55, and 35 in the three preceding weeks, rose again to 41 in the week under notice; of these 33 occurred in Glasgow, two in Aberdeen, and two in Paisley. The 18 deaths from whooping-cough showed a decline of ten from the number in the previous week, and included eight in Glasgow, four in Aberdeen, and three in Edinburgh. The 14 deaths referred to "fever," of which eight were certified as cerebro-spinal meningitis and six as enteric, showed an increase upon recent weekly numbers; 11 were returned in Glasgow and one each in Paisley, Leith, and Greenock. The 13 fatal cases of diarrhœa also showed an increase, and included six in Glasgow, four in Dundee, and two in Aberdeen. Of the eight deaths from diphtheria five occurred in Glasgow and two in Aberdeen; while the five fatal cases of scarlet fever included three in Glasgow. The deaths referred to diseases of the respiratory organs in these eight towns, which had been 171, 176, and 184 in the three preceding weeks, declined to 137 in the week under notice, but exceeded by 11 the number returned in the corresponding week of last year. The causes of 22, or 3·3 per cent., of the deaths in these eight towns last week were not certified or not stated; in the 76 English towns the proportion of uncertified deaths in the same week did not exceed 1·2 per cent.

HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been 24·7 and 25·5 per 1000 in the two preceding weeks, declined to 21·0 in the week ending Feb. 29th, a lower rate than had been recorded in any previous week of this year. During the first nine weeks of the current quarter the death-rate in the city averaged 25·7 per 1000, the mean rates during the same period being only 18·0 in London and 19·3 in Edinburgh. The 159 deaths of Dublin residents registered in the week under notice showed a decline of 34 from the number in the previous week, and included seven which were referred to the principal epidemic diseases, against three and four in the two preceding weeks; these seven deaths included three from whooping-cough, two from diphtheria, and one each from measles and diarrhœa, but not one from scarlet fever, "fever," or small-pox. These seven deaths were equal to an annual rate of 0·9 per 1000, the death-rate last week from these principal epidemic diseases being also equal to 0·9 in London and in Edinburgh. The fatal cases of whooping-cough corresponded with the number in the previous week, while those of diphtheria showed an increase. The 159 deaths from all causes in Dublin last week included 30 of infants under one year of age and 41 of persons aged upwards of 60 years; both these numbers showed a marked decline from those in recent weeks. Six inquest cases and two deaths from violence

were registered, and 63, or 40·0 per cent., of the deaths occurred in public institutions. The causes of three, or 1·8 per cent., of the deaths in Dublin last week were not certified; in London all the deaths registered were duly certified, while in Edinburgh the proportion of uncertified deaths was 5·9 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned Surgeons have been promoted to the rank of Staff-Surgeon in His Majesty's Fleet (dated Feb. 26th, 1908): Robert William Glennan Stewart, William Percival Walker, James Garfit Wallis, Herbert Reginald Harry Denny, Robert Robertson Fasson, John Reid Muir, John O'Hea, John St. John Murphy, Arthur Forbes Fraser, and Gerald Meade Eastment.

In accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet-Surgeon Walter Dowden, D.S.O., has been placed on the Retired List, at his own request, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets in His Majesty's Fleet (dated Feb. 27th, 1908).

The following appointments are notified:—Fleet-Surgeon: W. G. Axford to the *Pembroke*, additional, for Queensferry Hospital. Surgeon: H. Stone to the *Excellent*, lent, temporary.

ROYAL ARMY MEDICAL CORPS.

The undermentioned Lieutenants to be Captains (dated Jan. 30th, 1908):—William Byam, Charles Ryley, Patrick Dwyer, Phillip C. T. Davy, John F. C. Mackenzie, Harry T. Wilson, Richard C. Hallowes, James H. Campbell, George A. D. Harvey, Harold C. Winckworth, Harry W. Russell, Evelyn J. H. Luxmoore, Harry C. Sidgwick, Meurice Sinclair, George R. Painton, Nelson Low, Alastair N. Fraser, Robert H. L. Cordner, Herbert St. M. Carter, Augustine T. Frost, Kenneth A. C. Doig, Percy A. Lloyd Jones, Herbert O. M. Beadnell, Cecil R. Millar, George H. Richard, John St. A. Maughan, Lionel V. Thurston, Arthur W. Gater, and John P. Lynch.

The undermentioned to be Lieutenants on probation (dated Feb. 4th, 1908):—John James, Harold Henry Blake, Alfred Christopher Hermann Suhr, Wilfrid James Dunn, John Edwin Ellcome, Bernard Varvill, Frank Bell Dalgliesh, Alan Geoffry Wells, Gerald Joseph Keane, Fredrick Hoysted Bradley, Robert Milne Dickson, Frank Worthington, Claude Mallinson Rigby, Alexander Leslie Stevenson, Malcolm Leckie, Spencer Graham Walker, Charles Edward Litton Harding, Arthur Shepherd, William Joseph Tobin, Leo Murphy, Arthur Hubert Treby Davis, Walter Henry Skardon Burney, Arthur Leslie Foster, Joseph Wilfred Houston, Thomas Swan Eves, Robert O'Kelly, Falkiner Melton Hewson, Campbell McQueen, Alexander Edward Gordon Fraser, and John Smith McCombe.

Lieutenant Spencer G. Walker is seconded under the provisions of Article 300, Royal Warrant for Pay and Promotion, 1907 (dated Feb. 4th, 1908).

Colonel G. D. Bourke, C.B., will, on promotion to the rank of Surgeon-General, be appointed Principal Medical Officer of the Irish Command.

Major E. B. Steel has been appointed a Specialist in Mental Science for the Southern Army, India. Captain W. M. H. Spiller and Captain E. S. Worthington have been appointed to Belfast and Dublin respectively on arrival from India. Captain E. Ryan has taken over the charge of staff and departments at the Military Hospital, Edinburgh.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain David Smart to be Surgeon-Major (dated Feb. 19th, 1908).

The undermentioned having relinquished their commissions in the Auxiliary Forces will cease to belong to the Army Medical Reserve of Officers:—Surgeon-Lieutenant-Colonels: Walter D. Aubin, Francis L. Stephenson, and William C. Cowan. Surgeon-Major: John W. Moir. Surgeon-Captains: Arthur Y. Pringle, Leonard L. Hanham, and Samuel M. Sloan.

THE TERRITORIAL FORCE.

Sir Frederick Treves, Bart., G.C.V.O., C.B., has been appointed a member of the Territorial Force Advisory Board.

Lieutenant-Colonel J. S. Riddell, Aberdeen Companies R.A.M.C. (Vols.), has been appointed principal medical officer of the Highland Division; and Colonel Sir G. T. Beatson, Glasgow Companies, R.A.M.C. (Vols.), principal medical officer of the Lowland Division of the Territorial Force.

The following officers of the Royal Army Medical Corps have been selected for the appointment of Adjutants in the Royal Territorial Medical Corps, and have been ordered to join the Royal Army Medical Corps Depôt at Aldershot, to undergo a special course of instruction prior to appointment: Captains: R. H. Lloyd, J. M. Sloan, D.S.O., W. A. Woodside, E. P. Connolly, H. S. Roch, E. Bennett, and F. A. Stephens.

VOLUNTEER OFFICERS' DECORATION.

The King has conferred the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force:—

Eastern Command: Infantry (Volunteers): 4th Volunteer Battalion, The Essex Regiment: Surgeon-Captain Harry Thornton Challis (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Essex Volunteer Infantry Brigade).

Northern Command: Royal Army Medical Corps (Volunteers): Northern Command, Leeds Companies: Lieutenant-Colonel de Burgh Birch.

Scottish Command: Royal Garrison Artillery (Volunteers): 1st Fifeshire: Surgeon-Lieutenant-Colonel John Wilson Moir (retired). Infantry (Volunteers): 6th (Fifeshire) Volunteer Battalion, The Black Watch (Royal Highlanders): Surgeon-Major Charles Nairne Lee.

Southern Command: Infantry (Volunteers): 1st Volunteer Battalion, The Prince Albert's (Somersetshire) Light Infantry: Surgeon-Lieutenant-Colonel John Maurice Harper (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Cornwall and Somerset Volunteer Infantry Brigade).

Western Command: Royal Army Medical Corps (Volunteers): Cheshire Bearer Company: Lieutenant-Colonel George William Sidebotham. Welsh Bearer Company: Major Charles Downing (Brigade Surgeon-Lieutenant-Colonel, Senior Medical Officer, Welsh Volunteer Infantry Brigade).

FOREIGN HONOURS.

The following decorations have been conferred in connexion with the German Emperor's recent visit to England:—The Second Class of the Order of the Red Eagle, with Star, on Surgeon-General R. H. Quill, A.M.S., principal medical officer of Netley Hospital; and the Second Class of the Red Eagle on Lieutenant-Colonel R. S. F. Henderson, R.A.M.C., registrar and secretary of Netley Hospital.

Correspondence.

"Audi alteram partem."

ANOMALOUS REACTIONS GIVEN BY FEHLING'S SOLUTION IN TESTING URINE FOR SUGAR.

To the Editor of THE LANCET.

SIR,—In your issue of Jan. 18th Dr. J. Dixon Mann draws attention to certain points mentioned in my paper on the above subject in THE LANCET of Jan. 11th, and very rightly points out that there is a certain amount of evidence in favour of the view that the yellow precipitate obtained in testing certain diabetic urines with Fehling's solution is cuprous hydrate.

Without making any dogmatic statements with regard to the exact chemical constitution of this more or less yellow or yellowish-green substance, it is very easily demonstrated that the different coloured precipitates obtained in testing urines for sugar—varying from a milky greenish appearance to a bright red—all vary with regard to the subdivision of the particles; the greenish precipitate is in such a fine state of subdivision as to give the mixture an opalescent appearance but a prolonged use of the centrifuge always indicates that an actual precipitate is present; this precipitate appears as a dirty greenish mass. In the case of a urine containing a little more sugar a greenish-yellow liquid is obtained after boiling and here the precipitate appears more or less greenish-yellow. This precipitate separates out more quickly than the first and here the particles are in a somewhat less fine state of subdivision. With

a distinctly yellow precipitate separation is still easier, though even here it is often tedious and in all cases filtration is out of the question. With a red precipitate separation is easy; without the use of the centrifuge the red substance falls to the bottom of the tube in a very short time. Thus the colour of the precipitate varies in direct proportion to the fineness of its constituent granules, and it is almost certain that the mechanical factor exercises a very important effect in the exact tint of colour obtained. The yellow precipitate is only one stage between the dirty, dark-greenish precipitate and the red one, and if the yellow one is cuprous hydrate, what is the composition of the greenish ones? Apparently cuprous hydrate does not appear as a dirty greenish precipitate.

Dr. Dixon Mann says that the utmost comminution will not change the red of cuprous oxide to yellow. It is true that mechanical subdivision of the red particles is naturally limited, for the utmost effort will not produce particles fine enough to pass through an ordinary filter-paper; we cannot, therefore, expect to get the same intense yellow colour that is seen in urine where the particles easily pass through the finest filter. On the other hand, if the red cuprous oxide be ground for some time in a mortar and then mixed with a little water and transferred to a watch-glass it will be found that on carefully rocking the glass the more finely divided particles can sometimes be made to separate out, and these comparatively finely divided granules give an appearance much less red than the ordinary lower oxide. Again, in testing urines it is sometimes noticed that in, say, a reddish-coloured precipitate, the individual particles may be hardly apparent, but on the application of more heat the precipitate becomes almost scarlet, and here the individual granules can be quite easily distinguished by the naked eye.

In urine testing it is open to observation that the more distinctly red the precipitate is the larger are the individual granules. Since, however, we are unable by mechanical methods to obtain a fine enough subdivision of the particles it is clear that not much importance can be attached to comminution of the red oxide either for or against the yellow substance being cuprous hydrate. Dr. Dixon Mann refers to the generally accepted statement that cuprous hydrate when exposed to air changes into cupric hydroxide with the formation of a blue or greenish-blue colour; that, therefore, since the yellow precipitate obtained in urine testing tends to become blue or bluish-green when exposed to air it is probably cuprous hydrate. That this yellow precipitate tends to become green when filtered directly from a mixture of diabetic urine and Fehling's solution is quite true; this mixture, however, contains alkali as well as some cupric hydroxide, so we have on the filter paper the yellow substance, a fair amount of alkali, and traces of cupric hydroxide; that such a mixture will turn blue is no proof that we are dealing with the cuprous hydrate, for the red cuprous oxide when mixed with alkali and exposed to air also becomes blue after some time, and the more finely ground it is the quicker the blue colour seems to appear. If, however, the yellow precipitate is carefully and thoroughly washed free of alkali and cupric hydroxide it can be dried in air without changing its yellow colour to any appreciable extent, and I have had such filter papers exposed to the air for weeks without any change in the yellow colour. Some of these were moistened with water and dried several times, and yet they remained yellow; the addition, however, of a drop of sodium hydroxide solution to any part of the filter paper resulted in the formation of a more or less blue colouration in presence of the alkali which showed in strong contrast to the surrounding yellow. Identical results were obtained with red cuprous oxide.

Results in accordance with the foregoing statements are obtained by a study of the properties of the cuprous compound prepared by the interaction of cupric chloride and alkali. I think, therefore, that there are still a good many facts against the acceptation of the view that the yellow substance is cuprous hydroxide—a body the very formula of which is in many chemical text-books followed by a point of interrogation. Again, the view that the yellow substance is the hydroxide suggests the necessity of the formation of the red precipitate by a process of dehydration from the yellow substance. A trace of creatinin will prevent the yellow substance from becoming red and at the same time prevent an increase in the size of the particles. Is it likely that a trace of creatinin can prevent the dehydrating power of a strong alkali? This apparently untenable hypothesis is necessary, however, if we consider the yellow precipitate to be cuprous hydrate.

I am, Sir, yours faithfully,

Berlin, Feb. 22nd, 1908. HUGH MACLEAN.

MILK-SUPPLY.

To the Editor of THE LANCET.

SIR,—I feel it incumbent upon me to draw your attention to a lengthy letter in the *Daily Telegraph* of Feb. 18th, signed "Ex-M.P.," dealing with the London milk service and particularly with nursery milk. Not that the letter in question is of any value or importance to the scientific mind, and in fact only betrays the writer's ignorance of the subject, but the serious point involved is that the views he expresses are the logical outcome of the unceasing calumny to which the milk-supply in England has been for so long subjected, as it would seem to-day that milk-supply and religion are on much the same footing, being subjects on which anyone so disposed may put forth weighty criticism and dogmatic pronouncements. As the public draws its conclusions very much from statements presented in the press and is not in a position, as a rule, to verify or to disprove such statements, it is all the more important that the true aspects of such a vital question as milk-supply should be set forth by those whose knowledge qualifies them to do so. Such knowledge is possessed in fact by very few, and can only be acquired by actual practical acquaintance with all the details of milk-supply, together with a thorough scientific knowledge of all the various aspects of milk itself, its chemistry, bacteriology, and pathology, and this knowledge is not to be acquired by the simple reading of books and theorising thereon.

Again and again during the last few years scientific investigation has proved milk to be the "Waterloo" of foregone conclusions, such as, in particular, with regard to the significance of leucocytes and streptococci. The result of this campaign is most disastrous to progress and can only result in making matters worse than they were by creating strong opposition in the minds of all concerned with farming and dairy industries; and the sales of the milking herds advertised in the provincial papers at the present time, openly attributed to mischievous scares and fears of meddlesome legislation, indicate that it is clearly driving many of the best and most trustworthy producers out of milk producing, so that instead of having a better and cheaper milk service for the poorer community the reverse will be the case. For many years past the great dairy companies have been urging the need of reform and pointing out the ways in which such reform must be brought about, such as the enforcement of the Dairies, Milkshops, and Cowsheds Order, the improvement of railway transit, &c., and the only reply on the part of health authorities is an attempt to force measures through Parliament to enable them to take samples of milk at quite the wrong stage in its history in order to examine them for the presence of various ingredients, the significance of which is not really understood.

Is the Thames more likely to be purified by taking samples at the mouth and proving the presence in it of sewage organisms or by stopping the introduction of sewage itself into the stream? Proper supervision of production will naturally lead to improved methods of transit and when these are done there will be found little to do with methods of distribution and any other procedure is illogical and fruitless. I appeal therefore to you to use your great influence to call a halt to these attacks ere it be too late and to assist in directing opinion to inspection and control at the place of production. May I, in conclusion, say that the errors made by "Ex-M.P." are so palpable that I will not waste the time of scientific people by noticing them in detail.—I am, Sir, yours faithfully,

CECIL REVIS, A.C.G.I., F.C.S.

Maida-vale, W., Feb. 25th, 1908.

NEW ZEALAND AND PUBLIC HEALTH.

To the Editor of THE LANCET.

SIR,—I have read your leading article on public health in New Zealand with interest, and perusal of the report leads me to supplement your remarks.

It is curious to observe that the only system of quackery expressly mentioned in the New Zealand law under consideration is that which relates to diseases, real or imaginary, of the sexual organs; and it is worth while to

inquire why this prominence should have been given to a single development of a widely diffused evil? Bad as he is everywhere, the venereal quack in long-settled countries is not worse than many others; not worse, for example, than the dealer in sham electrical appliances, by whose advertisements, as every neurologist knows, patients are constantly not only defrauded of their money but are frequently prevented from seeking competent advice until the time at which it might have been useful to them has passed away. It is possible, of course, that the social and climatic conditions of New Zealand may be unfavourable to the development of the neurotic and dyspeptic affections which furnish rich harvests to the quacks of older communities; but it is, so far as I know, the only country in which women have votes for the members of the colonial parliament; and every medical man has had experience of the constant solicitude of mothers about the sexual relations of their sons. It is worth while to inquire whether the law under consideration has been an outcome of the influence of a feminine electorate upon the legislative body, and to speculate whether any analogous effects would be likely to follow from the institution of female suffrage in this country. The late Mr. Lecky, in his very thoughtful consideration of the suffrage question in "Democracy and Liberty," pointed out that women, and especially unmarried women, are on the whole more impulsive and emotional than men; more easily induced to gratify an undisciplined or misplaced compassion, to the neglect of the larger and more permanent interests of society; more apt to dwell upon proximate than upon more distant results. To whatever extent this aspect of the female character may be correct, it would point towards a probability of hasty legislation for the removal of admitted evils, and it more than suggests the possibility that the consequences of such hasty legislation might sometimes be even more prejudicial than the evils it was designed to remove. Having said this much, we cannot avoid the inquiry whether the New Zealand legislation be not of the nature sometimes irreverently described as "grandmotherly"—that is to say, whether it may not be calculated to keep the community in leading strings from which it might with advantage be emancipated.

Gambling and quackery are great social evils, perhaps the greatest against which an advanced civilisation is called upon to contend. Gambling strikes at the roots of honest industry as quackery strikes at the roots of health, and both alike are indications of profoundly diseased conditions of the body politic. The question is whether attempts should not be made to grapple with them at their sources rather than to apply repressive legislation to their effects. Schools which would teach the principles of rational conduct, and schoolmasters who would remember the saying of a great American that the turning-point of a boy's life was often the first occasion on which he saw a chance of obtaining a dollar without squarely earning it, would certainly diminish the public interest in "Limericks" and in "Winners," just as even a smattering of physical science would often suffice to display the absurdity of the pretensions of quacks. Our educational methods so far have made scarcely any appreciable advance upon those of the eighteenth century, and until they do so the superstitions and follies of the eighteenth century will still impede the progress of national prosperity.

I am, Sir, yours faithfully,

Feb. 24th, 1908. F.R.C.S.

DONATIONS AND BEQUESTS.—Under the will of Mr. Jesse Jacob the Miller Hospital, Greenwich, will receive £200 and the Seamen's Hospital, Greenwich, £100.—The treasurer of St. Peter's Hospital for Stone has received £1000 to endow a bed to be called "The Jacob and Rachel Vallentine Bed."—The trustees of the Annie Zunz Trust have promised a contribution of £5000 towards the rebuilding of the Royal National Orthopædic Hospital in Great Portland-street.—The following bequests have been made under the will of Miss Katharine Stewart Forbes of Ascot: £10,000 to the Brompton Hospital for Consumption; £10,000 to the Cancer Hospital, Brompton; £5000 to the Middlesex Hospital for the Cancer Ward; £1000 to the Royal Hospital for Incurables at Putney; and £1000 to each of the following institutions: the National Hospital for the Paralysed and Epileptic, Finchley; the Royal Berkshire Hospital; the Hospital for Sick Children, Great Ormond-street; the British Home for Incurables, Streatham; and the Surgical Aid Society.

THE ORGANISATION OF THE MEDICAL PROFESSION IN FRANCE.

(FROM OUR SPECIAL COMMISSIONER.)

REMARKABLE UNANIMITY IN THE DEPARTMENT OF THE SOMME.—ILLEGAL MEDICAL STRIKE AGAINST THE POOR RELIEF AUTHORITIES.—THREATENED PROSECUTION OF THE MEDICAL SYNDICATE BY THE GOVERNMENT.—M. MILLERAND, FORMER CABINET MINISTER, ENGAGED TO DEFEND THE MEDICAL PROFESSION.

Amiens, March 1st, 1908.

A SERIOUS contest has arisen in the department of the Somme which interests all members of the medical profession who have intrusted to them the care of the sick poor. In France there are two official organisations for the relief of the poor. These are the Bureau de Bienfaisance in large towns and the Assistance Départementale for small towns and rural districts. The latter is organised and controlled by the Conseil Général which to some extent corresponds to our county councils. The law says that help must be given but leaves the local authorities to decide how this shall be done. The income consists of a small subvention from the State, much larger subventions from the communes which belong to the department, and the largest sum is derived from a special tax which the department itself has a right to impose for local government purposes and which is known as the additional centimes. The department of the Somme contains 556,000 inhabitants but from this we must deduct the inhabitants of the chief town Amiens, numbering 91,000, then 20,000 for Abbeville, and 15,000 for three other towns which have Bureaux de Bienfaisance. Thus there remain 430,000 inhabitants for whom the Assistance Départementale is responsible. Out of this population from 36,000 to 37,000 persons claim medical relief in the course of the year; the actual figure for the year 1906 was 36,303. Interested in this or in other medical services, such as contract work for benefit societies, there are no less than 250 medical practitioners. They do not all live in the department but are so near it that their practice overlaps into the department. Rather less than a year ago a medical syndicate was formed, with its headquarters at Amiens, under Article 13 of the Law on Medical Practice of 1892. When the law of 1884 was enacted sanctioning the formation of syndicates—a term which in France practically means trade unions either of the employed or of the employers—such societies were allowed to possess property and to proceed at law; the unions of the medical profession were not at that time strong enough to be included in the benefits of the law. This was remedied in 1892, but Article 13, while giving to the medical profession the same rights to form syndicates as are given to all other professions and trades, stipulates that the medical syndicates thus formed must not attack the State or the local authorities. It will at once be seen that this clause cripples the action of medical men when dealing with such institutions as hospitals and asylums, for these are for the most part State or municipal institutions; and this is also the case with regard to poor relief. Up to the end of 1906 the medical practitioners who attended to the poor did so under the contract system. They received through the prefecture, but from the Conseil Général or county council, 2 francs per annum for every poor person inscribed on their lists. This sum is not only very insufficient but complaint was made that all the persons entitled to medical assistance at the public expense were not inscribed on the books of the medical men. Very often they were only inscribed when they had actually fallen ill. Then 4 francs instead of 2 francs were paid but that again was absolutely insufficient. Contract work can only be remunerative and that but to a very modest extent when many are inscribed and but few are ill.

In some other departments of France, and notably in the neighbouring department of the Seine Inférieure which has Rouen for its capital or principal town, a much better system was some years ago willingly established in response to the efficient organisation of the medical profession. Here two great principles are recognised. First, that the patient shall have the right to select the medical attendant whom he prefers. Secondly, that the medical attendant shall be paid according to the work done. The fee which medical men receive from the local authorities

of the Seine Inférieure is 1 franc or 10*d.* for every consultation in their own surgeries; 1.50 francs (1*s.* 3*d.*) for every visit within their own commune; 2 francs (1*s.* 8*d.*) if the patient lives outside the commune and 1½*d.* per kilometre when going to see the patient; nothing is allowed for the return journey. This is considered a fair arrangement and in August, 1906, the Conseil Général of the Somme decided in favour of abolishing the contract system and that the medical men should be paid 1 franc per consultation given in their own houses; only 1.25 francs (1*s.*) per visit to the patient's house, and in special cases only 25 centimes per kilometre. The advantages, however, of this offer were entirely destroyed by an appeal made by the Conseil Général to the medical profession to consent to a "last sacrifice in favour of public assistance," it being proposed that the total honorarium paid to the medical men in 1907 under the new system and the total cost of medical relief should not exceed the sum paid in 1905. During that year and in round numbers the total expenditure for medical relief by the Departmental Assistance, that is in the rural districts, amounted to 252,000 francs. Of this sum the medical men received as subscriptions paid under the contract system 63,900 francs, for operations 2500 francs, and for accouchements 7700 francs, or a total of 74,100. But the bill for drugs amounted to 89,000 francs and that for surgical apparatus to 1500 francs. Now in England for contract work at 5 francs a year, that is, 4*s.*, the cost of drugs is estimated at only about a third of the amount. If, instead of 2 francs, the contract had been 5 francs, the medical men would have received 159,650 francs and thus it will be seen that the drug bill would have represented a rather large third of the outlay. As in France medical men do not provide medicine the 2 francs given was a net receipt. The further expenses were 3500 francs to midwives and 83,000 francs paid to the hospitals in the towns for the patients sent to them from the rural districts. This makes a total of 251,100 francs.

In 1907, the subscription of 2 francs being abolished and a fee per consultation substituted, the amount which the medical men should receive would probably be a little more than double what was paid to them under the old system in 1905. As a matter of fact, instead of paying them double, it is proposed to give them only about two-thirds of the sum which they received in 1905. This extraordinary result has been brought about because of the understanding that the total cost for medical relief should not exceed that of the year 1905. As no such arrangement was made with the other departments of medical relief—such as the hospitals, the druggists, and the midwives—the medical men alone are left to suffer. The total outlay in 1907 amounts to about £14,000, while in 1905 it was £10,080. Therefore the medical men instead of receiving about £5500 for their year's work are offered only about £1700, and the remaining £3800 due to them are to be utilised to reduce the budget of 1907 to the figure of the budget of 1905. The druggists will not suffer, they will on the contrary receive more than before, and so will the hospitals and the midwives; but the medical men are to forego something like two-thirds of their tenpenny and shilling consultation fees. Considering that medical men as taxpayers contribute their full share of the cost of medical relief for the poor why should they and they alone be called upon to make such an enormous sacrifice?

During the course of the year 1907, foreseeing that something like the above result would occur, a syndicate of the medical practitioners of the Somme was formed and out of the 250 medical men concerned 230 signed a declaration pledging themselves to observe the principles of the syndicate, while 180 paid their subscriptions and enrolled themselves as members. This was certainly a very remarkable demonstration, though the local authorities do not seem to have understood its significance. This was all the more regrettable as the most urgent question which the medical profession wished to bring forward was precisely the matter of poor relief. This they might, of course, discuss but as already explained Article 13 of the Law of 1892 specially debars them from taking action. The medical syndicate decided that while submitting to the great loss described above for the year 1907 they would not continue in the service during the year 1908 unless the same terms were made with them as already exist in the Seine Inférieure. But the local authorities failed to realise the gravity of this threat. They thought that the organisation of the profession was not serious. It was even rumoured that the whole movement was merely a political intrigue conceived for the purpose of annoying the prefect and discrediting the Government. Medical men having always allowed themselves to be imposed upon from time immemorial it was difficult to believe that at last they were really in earnest. When, however, it became evident that matters were more serious than was at first anticipated and that the medical men would not serve any longer, the prefect announced that he was about to prosecute the medical syndicate under Article 13 of the law of 1892 for taking action against a local authority. To make it quite evident that the medical syndicate was not actuated by any political and anti-Republican motive they engaged for their defence M. Millerand who was Minister of Commerce in 1900. M. Millerand advised the syndicate to dissolve and to reconstitute itself under the Law on Associations of 1901 which allows all Frenchmen to form an association, but such bodies cannot possess property unless they make a declaration at the prefecture notifying their existence. An association possesses not quite as many rights as a syndicate but it escapes Article 13 of the Law on Medical Practice of 1892.

It may be questioned whether it would have been better not to have effected this transformation. A small fine and a reprimand would not have done the syndicate any harm but there was the danger of being suppressed. With a few verbal alterations the rules of the new association are practically the same as those of the dissolved syndicate, but it will cause considerable trouble to enrol anew all the members, though a large majority have come forward of their own accord and joined. Then throughout France the medical profession have expressed such warm sympathy with their fellow practitioners of the department of the Somme that the syndicate might have stood its ground. Time passed and yet no arrangement was made, so finally the whole medical staff ceased to work for the authorities on Jan. 1st of this year. On the other hand, from motives of humanity and also in a smaller degree from motives of policy, they declared that they were willing to continue to attend the poor till April, 1908. This they would do unofficially and gratuitously. When they give a poor man a prescription they no longer employ the official yellow sheets, contrived to facilitate the keeping of books and statistics. They use their own ordinary paper and prescribe what they choose and not the fixed remedies arranged for by the authorities and the dispensing chemists. Thereupon the latter refused to make up the prescriptions unless countersigned by the local mayor and it is quite possible that dearer drugs have occasionally been prescribed. All these irregularities are giving the administration considerable trouble; but as what the medical men prescribe they prescribe gratuitously, from motives of humanity, and will not and cannot be paid for their services, they cannot be compelled to use the yellow official forms, for they are no longer officials. Thus has this peculiar sort of strike continued since the commencement of the year. The prosecution threatened by the Government seems to have been abandoned and the question is whether some friendly arrangement will be effected before the month of April. The prefecture finds that the movement and the organisation of the medical profession are such that they cannot be dealt with lightly and therefore a favourable issue is thought probable.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The University.

THE annual meeting of the court of governors was held on Feb. 21st, the Vice-Chancellor (Alderman Beale) acting as President. The meeting was well attended and it was the occasion of an important statement which must of necessity be interesting to all the Midland counties. After a review of the year's work, in which he drew attention to the satisfactory character of the results so far secured, Mr. Beale proceeded to show that as a consequence of the well-considered policy of the past and in order to provide for the necessities of the near future it would be necessary before long that the University should again make an appeal to the public for a large sum of money. The money is necessary not only to replace that which has already been taken from endowments but also for the completion of the magnificent buildings which are still being erected at Bournbrook. It is also known that within a period of two or three years,

after the removal of the departments of physics and chemistry to Bournbrook, there will be room at Edmund-street for the further expansion and development of the departments of arts, medicine, and commerce, but that expansion and development must inevitably be hindered and delayed unless money as well as room is available.

Worcestershire and Medical Inspection.

The sanitary subcommittee having reconsidered the subject of the medical inspection of school children presented a further report to the education committee on Feb. 23rd. The subcommittee recommended that the inspection should be carried out by the inspector of midwives, a new inspector, and two assistants, with possibly the addition of a third assistant during the course of the ensuing year. After considerable discussion this proposal was adopted by the education committee. The subcommittee suggested that the salary of the inspector of midwives should be raised to £500, that the new inspector should be paid a similar sum, and that each assistant's salary should be £150. Ultimately the education committee decided to recommend that the inspector of midwives and the new inspector should be paid £400 per year and each assistant £175. The scheme has still to receive the approval of the council, but it is extremely interesting to note the different ways and different means by which county councils and other bodies are seeking to meet the requirements of the new Act. All the schemes which are being adopted cannot be successful and very few people seem to be particularly enthusiastic about the possibility of securing results commensurate with the expenditure which will be necessary.

Birmingham Sanatorium.

The report of this institution for the past year is of a most satisfactory character so far as the work done is concerned. During the year 1589 patients were received and the average stay was 17·8 days, whilst the daily average number of patients was 78·1. In other words, the total number of patients, the daily average, and the average stay were all greater than in the preceding year, which is sufficiently clear evidence that the work of the institution is progressing. The financial part of the report was less gratifying. The total expenditure for the year was £2808 and the management account showed an adverse balance of £44. The committee is justified, therefore, in its appeal for further support on the grounds of increasing work and deficient means.

The Children's Hospital.

The committee of management of the Children's Hospital states in its report for 1907 that the total number of patients was 14,849, or an increase of over 500 as compared with the previous year, but the average stay of each in-patient was almost half a day less than in 1906, and the weekly cost was 4*s.* 5*d.*, as contrasted with 4*s.* 6½*d.* in the preceding year. Nevertheless, in spite of increased economy, there was a deficiency of £277, as contrasted with £68 in 1906, and the accumulated deficiency now amounts to £1216. The deficiency is due partly to a decrease of donations and partly to increased expenditure. It is naturally a matter of deep concern, more especially when noted in association with the fact that a new hospital has been decided upon for which a considerable sum of money will be necessary, not only for creation, but also for maintenance purposes.

Birmingham and Midland Eye Hospital.

At a special general meeting of the governors of the Birmingham and Midland Eye Hospital held on Feb. 27th it was decided to purchase at a cost of £6500 some adjoining leasehold property in Barwick-street for the purpose of extending the accommodation of the hospital. Extension has become absolutely essential if the work of the hospital is to be continued in anything like an adequate manner and if it is to meet the requirements of the district. At present no less than 70 patients are awaiting their turn for admission and the numbers requiring attention will naturally increase as the population of the district grows, whilst it is not improbable that the new Act for the inspection of school children will also be a means of increasing the work. In the circumstances, therefore, the authorities are lucky to be able to obtain such favourably situated premises for the purpose of increasing the hospital's capabilities.

The General Dispensary.

The annual report of the committee of the Birmingham General Dispensary is a record of increasing work, increasing expenditure, and excess of expenditure over income. The Lord Mayor, who presided at the annual meeting, took the opportunity to draw attention to the increasing deficit and he expressed the opinion that the state of trade might be taken as accounting for it in part, but he thought that very many of the professional men and traders of the city either did not support the charities at all or not sufficiently. Apparently it did not occur to the Lord Mayor that many of the people to whom he referred have been educated or forced by circumstances to live so nearly up to their incomes that when they have made some attempt to provide for their families in case of death, and for themselves when overtaken by old age, they have little or nothing left to give as donations to charities. As the Lord Mayor admitted, the General Dispensary is not the only charity which finds either that its income is falling off or is not increasing sufficiently and if one, at all events, of the new Bills recently introduced by the Government becomes law many of the charities will probably feel the effects of an increased diminution of donations and subscriptions.

Annual Report of the City Analyst.

The yearly report of the city analyst shows that during the past year our food has been considerably less adulterated than in some previous periods and the reduced adulteration includes not only diminished adulteration by preservatives but also diminished adulteration in other ways. The adulteration of milk has been considerably less than usual. This is possibly due, in the analyst's opinion, partly to the comparatively cool summer of last year and partly to the number of convictions secured in the previous year. So far as the farmers are concerned there has been no adulteration during the past eight years and in Birmingham it would appear that preservatives are usually added by the middleman. In one case it was found that samples taken from a milkman's cart were pure but the milk which he supplied to shops was adulterated.

The Annual Report of the Medical Officer of Health.

Dr. J. Robertson's annual report on the health of the city during 1907 contains nothing startling but it is an eminently satisfactory record, for it shows steady progress towards increasingly better conditions except as regards the birth-rate. The mean death-rate was 16·3 per 1000, the birth-rate 28·3 per 1000, and the infantile death-rate 147 per 1000. The general death-rate is satisfactory, but it will most probably be considerably reduced during the next ten years, as improvements are introduced in works and in houses. As regards the birth-rate it is nearly useless to say anything for we have no means of checking the decrease. The infant mortality rate is still too high, though it is the lowest on record, but it certainly will be reduced if the new plans for the visiting and instruction of mothers are successfully carried out. A significant feature of the report is the statement that the mortality from pulmonary tuberculosis amongst men was as great again as that amongst women.

March 4th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Overlying of Children.

THE slaughter of the innocents, either by fire or suffocation, goes on apace. Yesterday three cases of overlying were inquired into by the deputy-coroner, Mr. W. Sellers, who said that cases of overlying of children "were occurring in Manchester almost every day, but there were more during the week-ends." He went on to say that it would have been thought that these cases would occur when the mothers were in a heavy sleep in the earlier parts of the morning, but in every case the parents said that the children were all right when they awoke in the early morning but were dead when they awoke again a few hours later. The explanation may be that when in their heaviest sleep the mothers are still and do not change their position but that when sleeping more lightly they turn over and suffocate their children. It is not improbable that if the parents did not get off as a matter of course with a verdict of accidental death but might be exposed to a charge of manslaughter this mode of reducing the population would receive a check. There is another possible factor helping to bring about the excess of these cases during "the week-end," as

that is the time in households where these cases commonly occur which is by preference devoted to extra drinking.

Lancashire Asylums.

At the quarterly meeting of the Lancashire Asylums Board on Feb. 27th it was decided to raise the rate of maintenance for patients received at the asylums from unions within the county board's district from 8*s.* 2*d.* to 8*s.* 9*d.* per week. This increase of charge is due to the balance having gone down considerably from last year. Presumably it indicates the tendency which just now seems universal for prices, and therefore expenses, to increase, the only exception being the too common lack of any corresponding increase of income. At the new asylum at Whalley the main building is to be 50 yards south of the position originally intended. It was said also that between 300 and 400 patients were to be housed on the villa system as a test of the cost and efficiency of the treatment. It must be hoped that success will accompany the experiment.

Mid-Cheshire Infirmaries.

Dispensaries and hospitals cannot be traced back very far in Mid-Cheshire. A provident dispensary was established at Northwich in 1859 but it was not till 1887 that the Victoria Hospital with 25 beds was founded. In 1898 Winsford and Middlewich followed the example of Northwich by providing the Albert Infirmary with its 17 beds. These hospitals do something to relieve the pressure on those of the large towns; they are near the patients and are good for the local members of the profession, as they tend to keep them interested and alert in regard to the progress of medicine and surgery. At the annual meeting of the supporters of the two institutions on Feb. 26th it was stated that there had been an increase of 50 per cent. in the number of patients (323) and the accommodation had been severely taxed. The Albert Infirmary had had 103 patients—the highest number recorded—and both institutions would welcome more donations and subscriptions, though they are managed economically. One pleasant feature is that the Working Men's Hospital Saturday Committee of Northwich had raised £270, penny a month collections proving most helpful.

Crewe Ambulance Class.

It seems quite appropriate for a railway town like Crewe to have an ambulance class, and its success shows that the members of the Crewe Coöperative Society, St. John Ambulance Class, 50 in all, have been earnest in the work, as they have all passed the examination with honours. Mr. J. Lawrence, M.R.C.S. Eng., L.R.C.P. Lond., has been presented with a handsome cabinet.

March 3rd.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Cardiff Infirmary.

THE whole of the £30,000 required for the erection of a new wing in connexion with the Cardiff Infirmary has now been promised and Mr. John Cory, who promised provisionally £5000, has sent this sum to the treasurer of the institution. There are at present 184 beds in occupation—a number quite insufficient for the needs of a district with a population approaching half a million. The annual report of the governors states that the expenditure last year amounted to £14,190 and that the income fell short of this amount by nearly £3000. The additional wing will require, it is anticipated, another £4000 annually. At the annual meeting of the governors Mr. John Lynn Thomas suggested that the board of management should take into consideration the desirability of reorganising the constitution of the institution in order to effect some economies in the administration.

West Wales Sanatorium.

In April, 1905, the Carmarthen county council decided to contribute the sum of £500 towards the cost of the Alltymynydd Sanatorium and to make an annual grant of £130. In order to legalise these payments it was found necessary to take advantage of the provisions of the Isolation Hospitals Act, 1893, and an inquiry was recently held by the council to decide whether an isolation hospital should be established in the county and whether, in accordance with Section 26 of the Act, the council should declare pulmonary tuberculosis to be an infectious disease within the meaning of the Act so far as the county of Carmarthen was concerned. It was stated at the inquiry that the cost of the proposal would entail a rate of only one-twentieth of a penny in the £. A majority of the county councillors who were engaged in the inquiry decided to recommend the council to take the necessary steps to enable the contributions named to be given. It is to be regretted that this recommendation did not meet with the approval of the whole council when it came before it. Some members of the council appear to have been influenced by a statement that the effect of making pulmonary tuberculosis an infectious disease in the county would be that the movements of consumptive persons would be harassed. This view is very distinctly traversed by Dr. H. Timbrell Bulstrode in his recently issued report. He states that a person suffering from pulmonary tuberculosis is not by virtue of the action of a county council in making the disease an "infectious disease" rendered amenable to any of the disabilities under the Public Health Act, 1875, or other measures relating to infectious diseases, nor is the disease by reason of such addition a notifiable disease. A consumptive person is thereby subjected to no limitation of his movements and to no disqualifications. "The application of the term 'infectious disease' to pulmonary tuberculosis must, indeed, in this case be regarded rather as a legal technicality necessary to satisfy the terms of the statute than as a scientific declaration."[1]

Anthrax in Glamorganshire.

An outbreak of anthrax which up to the present has affected seven men, one fatally, is reported from a small village called Ynismudw situated in the rural district of Pontardawe, some ten miles to the north of Swansea. During the early part of last month 15 cows had died on a farm in the village. Upon a county veterinary inspector visiting the farm he found that the carcasses after being cut up had been buried only a few feet from the surface of the ground in a field 250 yards from the farmhouse. He made arrangements for carrying out the regulations of the Board of Fisheries and Agriculture and three of the men who assisted in the work of exhumation and reburial were taken ill within a week. They were admitted to the Swansea Hospital and found to be suffering from anthrax; and one, a butcher, who had skinned one of the affected animals, had his forearm amputated on Feb. 27th. He died on the 29th, 14 days after the date of the infection and eight days after he had first complained of being ill. On March 2nd four other men were reported to be ill from the same disease. They all lived in the vicinity of the infected farm but only one had any direct connexion with it. At the last meeting of the sanitary committee of the Glamorgan county council it was stated that some of the meat and the hide of one of the affected animals had been disposed of in Swansea.

Medical Inspection of School Children.

At the quarterly meeting held on Feb. 13th the Cardiganshire county council agreed to arrange a conference between the council, the education committee, and the several district councils in the county for the purpose of considering the question of medical inspection of school children in its general aspects and of deciding upon the feasibility of concerted action on the part of the different authorities concerned. All the medical officers in the county will be invited to attend. A motion was adopted in favour of the cost of the medical inspection being borne by the Imperial Exchequer and not by local rates.

South Devon and East Cornwall Hospital, Plymouth.

The annual meeting of the subscribers to this institution was held on Feb. 28th under the presidency of Mr. F. Layland-Barratt, M.P. The medical report stated that during 1907 the in-patients admitted numbered 1413, compared with 1223 in 1906. The financial statement showed that the receipts amounted to £7650 and the expenditure was £9807. The invested property of the hospital is now over £100,000. The chairman announced that the late Sir Massey Lopes had bequeathed £6000 to the institution, bringing his total donations to the sum of £20,000.

March 3rd.

[1] Report on Sanatoria for Consumption, and Certain Other Aspects of the Tuberculosis Question, by H. Timbrell Bulstrode, M.D., p. 143.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Carnegie Trust and the Universities of Scotland.

THE annual meeting of the Carnegie Trustees was held on Feb. 25th at the Westminster Palace Hotel, London, Lord Elgin presiding. The report was for the nine months from Jan. 1st to Sept. 30th, 1907, the financial year having been shortened in that year in order to bring it into line with the academic year of the University. Under the quinquennial scheme of grants the universities had received during the nine months in question for library purposes and for provisional assistance in teaching £4800, for buildings and permanent equipments £14,800, and towards teaching endowments £2400. The extra-mural schools—under which head are included the School of Medicine of the Royal Colleges, Edinburgh, the Edinburgh Medical College for Women, Anderson's College Medical School, Glasgow and West of Scotland Technical College, Heriot-Watt College, West of Scotland Agricultural College, and the Edinburgh and East of Scotland Agricultural College—received for buildings and permanent equipment £8685 1*s.* 10*d.* and for provisional assistance in teaching the grants paid for the academic year 1906–07 amounted to £700 5*s.* The committee has delayed proceeding to a second quinquennial distribution and intends to meet the more immediate needs of the universities and colleges over a period of nine months from Jan. 1st to Sept. 30th, 1908. Under this interim scheme grants to the amount of £31,227 will be provided for. The proposals of the universities and extra-mural schools with regard to a second quinquennial distribution of grants are at present under consideration by the committee and a subcommittee consisting of the chairman, Lord Balfour of Burleigh, and the Lord Advocate had already conferred with the various university authorities on the matter. Under the scheme for the endowment of research appointments were made to 20 fellowships and to 26 scholarships, and grants of varying amounts had been made to 56 applicants, the total expenditure under this scheme amounting to £7003 17*s.* 9*d.* Applications for fellowships, scholarships, and grants for the academic year 1908–09 must be lodged with the secretary to the trust on or before May 1st. The expenditure on class fees in the summer session 1907 amounted to £11,684 13*s.*, an increase of £61 6*s.* 6*d.* as compared with the previous year. The average payment per student for the same period has risen from £6 15*s.* 8*d.* to £7 2*s.* 7*d.* A scheme of inclusive fees is at present under consideration. The committee was gratified to receive intimation from the Universities of Glasgow and Edinburgh of the appointment of advisers of studies in the Faculty of Arts for the current winter session. During the period covered by the report seven beneficiaries had refunded the fees paid for them by the trust. Appendix E to the report gives the regulations as to payment of class fees, the more important of which are as follows: The applicant must be over 16 years of age, of Scottish birth or extraction, or must have attended a school in Scotland for two years. Conditions are also laid down regarding preliminary education. A student cannot get fees for classes belonging to a further stage of his curriculum, or for other than the ordinary qualifying classes until he has passed the ordinary graduation examination in the relative subject. With regard to the Royal College of Physicians' laboratory, the report again refers to the appointment of Dr. James Ritchie as superintendent and states that he has been occupied in improving the research equipment of the laboratory. There were 24 workers engaged on various investigations. The excess of expenditure over income has been met by the Carnegie trust and amounted to £449. This sum is independent of the capital which the trust invested in the buildings when taking them over.

Royal Edinburgh Asylum.

The annual meeting of the governors of this institution was held on Feb. 24th, Professor Rankine occupying the chair in the absence of the Lord Provost. The report by the ordinary managers referred in eulogistic terms to the services which had been rendered to the institution by Dr. T. S. Clouston, in his capacity as physician-superintendent, as a clinical instructor of students, and as a contributor to the literature of his subject. Dr. Clouston in his report showed that the total number of patients under treatment was 1154 and that there had been 317 admissions during the year. The number of private patients admitted was 134. Bangour village had been able to receive most of the patients from the Edinburgh parish council. Dr. Clouston made some interesting comments on the effect of influenza, pointing out that from 1874 to 1890 the number of melancholics admitted had never touched that of the maniacal. In the last 18 years the proportion had risen from 40 to 46 per cent. In 1900 for the first time the numbers of depressed exceeded that of the excited and again in 1905 the same happened. He referred to the increase of alcoholism amongst the women in the working classes and pointed out the disastrous effects that this would have upon the population in the future. There were still 24 patients in the institution who were in it when he assumed office in 1873. Dr. Clouston, in conclusion, referred to the severance of his connexion with the institution, to the loyalty of his staff now scattered all over the world, and to the great future which the institution had before it for humanity.

Medical Inspection of School Children in Dunfermline.

The second annual report of the Carnegie Institute, Dunfermline, has just been issued. During the past year 1068 boys and 1208 girls have been examined. The result of the examination of these children is considered in the report. It is stated that a point which strikes one in drawing up a report of this nature is the difficulty of ascertaining the number of children who have received treatment consequent upon the letters sent to the parents. Accurate information as to this can only be obtained from the medical men to whom the parents take the children, a method which is at the present time impracticable.

The Dr. James Finlayson Memorial Lecture.

The movement to commemorate in Glasgow the late Dr. James Finlayson by the establishment of a lectureship, took practical form last week, when a lecture was given in the hall of the Faculty of Physicians and Surgeons by Dr. Norman Moore of St. Bartholomew's Hospital, London. Sir Hector C. Cameron explained that it was the intention of the committee sooner or later to make some permanent arrangement for the perpetuation of the lectures, probably by handing over the funds at their disposal, by deed of gift, to a body of trustees. In the meantime the committee thought that it would be well to make a beginning, and that, whatever interval might elapse before another lecture, at all events they should invite a lecturer to come to Glasgow while Dr. Finlayson's memory was still green amongst them. Dr. Moore chose as his subject "Schola Salernitana," a book in Latin verse, composed at Salerno during the twelfth century, and evidently not the work of a single man but a compilation of maxims. The poem was a collection of dicta upon the preservation of health, on the uses of herbs, and on the remedies for some diseases, so that it treated of what in modern times would be called *régime*, or hygiene, diet, materia medica, and therapeutics. Dr. Moore quoted many of the Latin maxims with which the book abounded, giving their quaint translation by early writers, as to simple living and the efficacy of herbs. At the conclusion of the lecture a detailed account was given of the 25 MS. copies existing in the British Museum, Corpus Christi library, and the Bodleian. It was evident that the book was known in England as far back as the reign of Henry III.

The Unfortunate Position of Ayr County Hospital.

The report read at the sixty-fourth annual meeting of the friends and supporters of Ayr County Hospital states that during the year 1907 the total number of cases treated in the house was 732, an increase over the previous year of 18, and the number of persons who received treatment at the dispensary was 1520, a decrease of 16. The total ordinary income for the year was £2563, an increase of £434, and the total ordinary expenditure of the year was £3678, an increase of £392. The extraordinary income for the year amounted to £2063, of which £1704 was the sum received in response to the special appeal issued in the beginning of the year. The directors regretted to report that the ordinary income of the hospital had, in spite of strenuous efforts to increase it, been insufficient to meet the ordinary expenditure by a sum of not less than £1115. Notwithstanding the fact that during the year extraordinary income amounting to over £2000 was received the directors found that there was still a deficit of £433 in their revenue account. Towards the end of the year it became quite clear that it was practically impossible to effect any substantial increase in the income and the situation was carefully considered in consultation with the

medical staff. The result of the deliberations was that the directors resolved to close a portion of the hospital, thereby reducing the staff and the general expenses. For the present the directors had given instructions that one large and four small wards were to be closed, thus reducing the accommodation of the hospital by 20 beds. It was with extreme regret that the board took this step but the only alternative was to run further into debt, a course that it did not feel justified in adopting.

The Relative Responsibility of the Heads of a Hospital.

The committee in charge of Blamarthill Fever Hospital, belonging to Clydebank and Renfrew Burghs, is evidently not clear as to who is responsible for the management of the internal affairs of the hospital. Ever since the building of the hospital some 12 years ago a medical man in the district has performed the duties of medical superintendent, there being no other practitioner in attendance. Since the November elections the management committee has undergone some changes in its composition and now opinion is divided as to what a medical superintendent really means. Some contend that the medical man's duties are confined to visiting the patients and prescribing for them and that the committee and the matron are the responsible heads of the institution. Others again maintain that the medical man, being medical superintendent, is the responsible head of the institution and that on questions pertaining to management the Local Government Board would hold him responsible. The committee has now decided to settle the matter by appealing to the Local Government Board to define the exact position of the medical officer and to set the question at rest once and for all.

University of Aberdeen.

The senatus, at a meeting held on Feb. 25th, resolved to confer the honorary degree of LL.D. on Mr. W. D. Halliburton, B.Sc., M.D. Lond., F.R.S., professor of physiology, King's College, London, and Colonel W. Johnston, C.B., M.A. Aberd., M.D. Edin., late assistant director-general of the Army Medical Service.

Death of Dr. Andrew Wallace of Turriff.

Dr. Andrew Wallace died at his residence, Towie House, Turriff, on Feb. 27th, after a brief illness, at the age of 75 years. Dr. Wallace graduated in Arts at King's College, Aberdeen, and afterwards took the degree of M.D. of the University of Aberdeen and became L.R.C.S. Edin. About 50 years ago Dr. Wallace acquired the late Dr. Culbard's practice in Turriff where he devoted his life to his profession and enjoyed the utmost confidence of his patients and friends.

March 3rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Milk-supply of Ireland.

A Local Government Board Order just issued under the Contagious Diseases (Animals) Acts, 1878 and 1886, contains important regulations relating to dairies, cowsheds, and milkshops in Ireland. Local authorities are to be made responsible for securing a clean and wholesome milk-supply and power is given to local authorities to make regulations suitable to their respective districts, and they are reminded that they can exert an important influence on the general welfare and health of the people in the regulation of the milk-supply and the hope is expressed that they will recognise their responsibilities. A very important provision of this Order is as follows:—

> Every purveyor of milk or person selling milk by retail shall take all reasonable and proper precautions in, and connexion with, the storage and distribution of the milk and otherwise to prevent the exposure of the milk to any infection or contamination.

Then follows a list of places in which the storage of milk is prohibited. Persons suffering from pulmonary tuberculosis or any other infectious disorder are prohibited from handling milk vessels or assisting in the sale of milk. The penalties under the order are £5 for every offence and in the case of a continuance 40*s.* for each day after written notice of the offence is received from the local authority.

The Tuberculosis Exhibition.

The Tuberculosis Exhibition was opened in Newtownards on Feb. 25th by Sir John Byers who lectured on "The Causes of the Decreasing Mortality from Consumption in England and Germany."

Health of Belfast.

The report of the medical officer of health for the week ended Feb. 22nd shows that the death-rate reached the unusually high point of 30·7 and 3·8 from the principal zymotic diseases. There was an excess death-rate of 6·6 from affections of the chest and 2·1 from zymotic diseases (measles, 1·5; whooping-cough, 1·3; and other zymotics, 1·0).

March 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Absorption of Tuberculin by the Rectum.

M. Calmette and M. Breton have tried the effect of rectal injections of tuberculin on four patients suffering from apyrexial pulmonary tuberculosis. They gave it in doses of 0·01 centigramme in enemata of 50 grammes of milk. Following the injection all these patients showed the typical febrile reaction. The first three of them had had a drop of the tuberculin solution instilled into the eyes some time before and in these the reappearance of the ophthalmo-reaction was noticed. The rectal injection of tuberculin in non-tuberculous subjects who gave no ophthalmo-reaction was followed by no rise of temperature and no redness was observed in the eye that had been previously tested. The results of these observations were communicated by their authors to the Biological Society on Feb. 16th.

A Method of Resuscitating Animals from Chloroform Syncope.

At the same society Mdlle. Robinovitch described a method which she has devised in the first instance for the resuscitation of animals apparently killed by electrocution. Several authors had already shown that "electrocuted" rabbits could be revived by stimulating them rhythmically with the electric force which had rendered them insensible if the head of the animal were placed in the circuit of the current. It was a more difficult and even impossible matter to effect a like result in dogs when cardiac syncope had occurred. In Mdlle. Robinovitch's method the animal's head is excluded from the circuit and the rhythmical impulses are directed to the stimulation of the respiration and blood pressure. Since adopting such a plan this observer has succeeded in reviving a large number of dogs suffering from cardiac or respiratory syncope caused by chloroform or "electrocution."

Vacant Chairs in the College of France.

The Academy of Sciences has been asked to submit the names of suitable candidates for two vacant chairs in the College of France, those of General Chemistry and General Biology. The first has become vacant by the translation of M. le Chatelier to the Sorbonne and the second by the death of Professor Charrin. At the first voting M. Matignon, who has for several years acted as substitute for M. Berthelot, and M. Gley were almost unanimously chosen as the men best suited for the posts. The alternative names sent up were those of M. Job, Professor in the Faculty of Toulouse, and M. Moussu, Professor in the School of Alfort.

The State Control of the Medical Staffs of Provincial Hospitals.

The Minister of the Interior has recently addressed a circular to all prefects of provinces in which, after paying a tribute to the good work of the majority of medical men serving on the staffs of hospitals, he reminds them that it is the business of the administrative commissions to keep an eye on the hospital service and see that the members of the respective staffs attend to their duties with unremitting regularity. The Minister of the Interior further reminds them that it is in the hands of the commissions to dismiss from office those hospital officers who do not fulfil their duties properly and who have simply undertaken them in order to obtain the credit of their posts. At the same time it is officially recognised that medical men must be protected against arbitrary dismissal. Until the present time the aforesaid commissions have had powers to cancel appointments with the sole consent of the prefect. Henceforth, before giving his approval that official must make a full report of the matter to the Ministry under which he holds office. This report

must include both the charges alleged against the medical man and his explanations of them. In a case of extreme urgency the prefect can suspend the offender from duty whilst he awaits the decision of the Committee of Administration, but this action must be justified to the Ministry. The Minister also requests that prefects shall not endorse the deliberations of their committees on such matters as the method of election or the length of term of office of the physicians and surgeons of the hospital staffs without his own consent being first obtained.

The Disinfection of Books.

On Feb. 10th M. Lucas-Championnière communicated to the Academy of Medicine a paper by M. Berlioz on the disinfection of books. This is a very difficult thing to do properly. The first methods adopted for the purpose were chemical, but as the results obtained from them were by no means satisfactory certain physical processes were tried, which were even less promising, as the heat which was employed absolutely ruined the books. M. Berlioz uses a liquid that gives off aldehydes when it evaporates, and this is placed in a stove for two hours at the temperature of 95° C. together with the books. To avoid accidents the books need only be wrapped in a sheet of paper and such mishaps are very rare, only one old binding having been slightly damaged. The great advantage of this process is that the books can be disinfected with the leaves unopened, and that there need be no anxiety about them. M. Lucas-Championnière has made some control experiments to test the value of the method and he finds that it destroys almost all the known varieties of pathogenic bacteria. The only exceptions were the bacillus subtilis, which need not be taken into consideration from the point of view of disinfection, and anthrax spores, the occurrence of which in books must be extremely rare.

A Chair of Hydrology at Paris.

The President of the Council of Ministers has just received a deputation composed of members of Parliament, medical men, and directors of companies possessing rights over springs (*compagnies fermières*) at Vichy, Luchon, and Contrexéville. The deputation asked for the creation of a chair of hydrology and climatology at the Paris Faculty of Medicine. The Minister of the Interior approved the idea and promised to speak in favour of it to his colleague, the Minister of Public Instruction.

Feb. 29th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

The War against Tuberculosis.

THE authorities of the canton of Zürich, an area having a population of 420,000, have just made an important step forward in the war against this dire disease, to which more than a tenth of the population still succumb. The cantonal authorities have just issued the following orders to be carried out in the whole district or canton. The local boards of health (*Gesundheitsbehörden*) must see that spittoons are placed in all public buildings and that they are kept in proper order and disinfected. The Hygienic Institute of the University undertakes the examination of suspicious sputa free of charge on due application from medical men. The latter are to give proper instructions to tuberculous patients and their attendants to prevent the spread of the disease. Medical men are required to notify every infective case of tuberculosis. They may also order the disinfection of rooms occupied by tuberculous patients after the removal or the decease of the latter and the local authorities must undertake these disinfections free of charge. The State contributes a certain sum towards the outlay incurred by the parishes for this purpose. In all larger places a bureau is to be founded as a centre for combating tuberculosis. These injunctions will be well carried out and will unquestionably have a most beneficial result in reducing the mortality from tuberculous disease.

Idiopathic Enlargement of the Œsophagus.

Dr. Armin Huber of Zürich has published a very detailed account of two cases of idiopathic enlargement of the œsophagus, an affection which is rarely diagnosed during the patient's life. Dr. F. Krauss wrote an elaborate monograph on this condition some years ago, and Dr. Neumann in 1900 reported 70 cases, most of which, however, were discovered by the pathologist only. The improvement of skiagraphy during recent years has made this condition easier to diagnose. As regards etiology Dr. Krauss attributes the origin of the disease to a primary nervous lesion—namely, partial paresis of the vagus nerve and consequent atony of the longitudinal muscles of the œsophagus combined often with local contraction of the transverse muscles. In several cases some infectious disease such as diphtheria was responsible for the malady. In Dr. Huber's two cases the patients were aged 52 years and 20 years respectively; the important points were (1) the establishment of an exact diagnosis during life by means of skiagraphy; and (2) the relief afforded to the patients by artificial feeding through an œsophageal tube.

Medical Students at the Swiss Universities.

During the winter session 1907–08 the number of medical students at the five Swiss universities decreased to 2093, of whom 1506 were foreigners, mostly Russian, while only 587 were of Swiss nationality. Most of the foreign students were ladies, the actual number being 1129, and they also were principally of Russian nationality. The distribution of these students among the several universities was as follows: Basle 171, of whom 49 were foreigners; Bern 560, of whom 441 were foreigners; Geneva 484, of whom 405 were foreigners; Lausanne 384, of whom 307 were foreigners; and Zürich 494, of whom 304 were foreigners. The increase of fees and the greater stringency of the requirements for admittance have therefore had as yet but little effect in keeping out the foreign element. As the Swiss authorities are not the most competent judges of Russian certificates, it has been proposed to verify the latter through the Swiss Consulate-General in St. Petersburg.

Zürich, March 2nd.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

"Frigora Mitescunt Zephyris."

BY a thousand subtle indications more felt than seen—Tennyson's

> "Blind motions of the Spring
> That show the year has turned"—

we are now at the end of winter and the tourist-world is beginning to throng our cities and art centres, with the returning swallow. The last three months have not been very true to the Italian record, fog—a comparatively new-comer—having combined with cloud and rain to exclude the sun. But now "primavera," beautiful as its name, has alighted on mountain, on plain, and on seaboard, tempting into the open the invalid or convalescent who has been "cultivating his fireside" and inviting the northern visitor, weary of his long winter, to the sunnier aspect of the "Watershed." No deterrent in the form of influenza prevails on this side of the Alps, and though that multiform malady has not been wholly absent still it has never assumed the proportions of an epidemic or contributed to the death-rate or even the sick-list in more than a comparatively few cases. One of the first to appreciate the presence of spring has been His Holiness Pius X. who, on the afternoon of Friday last (Feb. 21st) left the suite of apartments to which he has so long been confined for a walk of nearly an hour's duration in the gardens of the Vatican—an additional attraction being the splendid young lions just deposited there from Abyssinia, the gift of King Menelik. Accommodated in the cage in which they performed their long journey, they will shortly be provided with more distinguished quarters in that part of the gardens known as the "Grotto of Lourdes"—quarters capable of being enlarged according to their growth, which bids fair to be formidable, though not such (it is hoped) as to make them less familiar to His Holiness than the traditional lion associated with S. Jerome!

Haste at Meals: its Disadvantages and Dangers.

The leisurely Italian hitherto known to his contemporaries is a rapidly receding type, in keeping with his exchange of "dolce far niente" for that other motto "time is money." For better, for worse, he realises that he is a citizen of a country which is now hooked on to the express train of the twentieth century and his habits are being changed accordingly. The hurried meal, often consumed in the dining saloon of the "direttissimo," is hardly more of a hasty function than the "colazione" or the "pranzo" of

which he partakes in the bosom of his family; and the results are already showing themselves in the nemesis that always attends upon hustled nature—among them dyspepsia, or even, as professional authority asserts, appendicitis. A sad case of the consequences of bolting food is just reported from Turin, where a lady guest at a family party in the act of swallowing some "pasta asciutta" (dry pastry) became aware that she had taken a little bone in the mouthful, probably contained in the "sugo di carne" (meat gravy) with which the "pasta" had been served. Spasmodic efforts to extract the bone were of no avail, seeming rather to drive it further into the œsophagus. The coughing ceased, without, however, giving relief—intense pain being one of the distressing symptoms. Removed to the hospital of San Giovanni, she was at once placed under surgical treatment, but none of the attempts to remove the bone succeeded. Still suffering acutely she began to show symptoms of pyæmia and ultimately succumbed from exhaustion. The necropsy, which has not yet been reported, is expected to confirm the hypothesis of blood poisoning supervening on perforation of the œsophagus. This is the second recent case, I may add, of death caused by the hasty ingestion of food at meals, the previous one being that of an officer who expired at table from suffocation thus induced.

Unsound Meat.

The quality of the food, particularly of the butcher's meat, consumed at meals is a theme of present interest, justifying the enhanced vigilance of the official inspectors. Measly pork, tuberculous beef, and sausages manufactured from horse flesh of dubious quality have been verified often enough to awake public alarm and to stimulate the central authority in its efforts to diffuse as widely as possible the knowledge by which healthy meat is distinguishable from bad. Travelling lectureships established by the various "Comizi Agrari" have with this object been instituted, one of the most efficient in *personnel* and equipment being that which was inaugurated the other day at Sanminiato (in the province of Florence). Theoretical instruction goes hand-in-hand with practical illustration in these lectures and the result cannot be other than salutary, in proportion as they are effectively given and intelligently taken in. "Forewarned is forearmed" is an aphorism the public are not slow to put in practice, particularly in the everyday matters of food and drink.

Feb. 24th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Changes in the Regulations for Disinfection and the Notification of Diseases.

IN consequence of radical changes which have been made in the legislative enactments relative to epidemic disease the health department has now published some new rules as regards the notification of infectious diseases and the performance of disinfection in such cases. These rules came into force on March 1st. The following diseases must now be notified by the medical adviser of the patient: cholera asiatica, cholera nostras, plague (even when only suspected), typhoid fever, variola, scarlet fever, measles, rubeola, diphtheria, dysentery, trachoma, pertussis, erysipelas, puerperal fever, influenza (when verified microscopically), epidemic cerebro-spinal meningitis, hydrophobia, anthrax, glanders, trichinosis, parotitis, relapsing fever, and tuberculosis. Cases where illness has followed the eating of meat obtained from animals which have died from swine plague have also to be notified. In all these cases a thorough disinfection of any place where the patient has lived at the time of his becoming ill is to be effected by the municipal or local board. Up to now disinfection has not been obligatory after measles, influenza, rubeola, varioloid, varicella, parotitis, and pertussis. In cases of tuberculosis a disinfection will only take place when the patient changes his abode, or goes into a hospital, or dies. A centralisation of the arrangements for disinfection will be effected within a few weeks, so that the procedure will be cheaper and more efficient than formerly.

An Action for Damages against a Surgeon.

A somewhat unusual case was recently tried before the Chief Justice of Austria. The plaintiff was a woman who sought to obtain £2000 damages from one of our most eminent gynæcologists and his assistant for bodily injury alleged to have been sustained during the endeavours that were made to restore animation after syncope supervening in the course of surgical anæsthesia. The woman was operated on at the clinic of Professor Schauta by his assistant who was acting at this time as his substitute, and when her breathing stopped artificial respiration was resorted to with a good result. The woman was discharged four days after the operation which lasted only for half an hour. She afterwards noticed that there was something wrong with her spine and she was eventually treated at a hospital for caries of the seventh cervical vertebra. This she believed had been caused by the manipulations necessary for resuscitation; but the evidence of the medical men who saw her before and after the operation, and especially the evidence of her family adviser, proved that she had been suffering for many years from tuberculous disease of the lungs and the bones, that the disease of the vertebra was of a tuberculous nature, and that it must have existed previously to the operation. The woman had been able to walk home after the operation, which showed that no injury could have been done to her spine. The claim was dismissed by the judge.

Tabes Dorsalis in an Infant.

At a recent meeting of the Medical Society Dr. Marburg showed a girl, aged two years, whose father had acquired syphilis 20 years ago. The girl was the fifth living child of the parents. The first four have been, and still were, in good health; a miscarriage then occurred in the second month, and the child in question came next. The girl throve up to her thirteenth month but then bilateral atrophy of the optic nerve, stridor with attacks of laryngeal spasm, and general palsy set in, so that the poor child could not sit or stand or move her head. The extremities could hardly be moved voluntarily, the pupils were different in size and reacted slowly to light, and the reflexes of the patella and the tendo Achillis were absent. The child did not speak but she was not idiotic. These conditions were analogous to the symptoms of tabes dorsalis in adults; Romberg's sign and ataxy, however, could not be elicited because of the paralysis of the limbs. Loss of control of the bladder was another premonitory symptom which existed in this case as well. Up to now there have been recorded only 50 cases of infantile tabes dorsalis, or tabetiform disease, of which 34 cases were due to hereditary syphilis and five had manifestations of acquired syphilis, whilst in the remaining 11 cases the evidence was not quite clear as regards the presence of infection. In 12 cases the parents had tabes dorsalis or general paralysis. It was interesting to note that 29 children were girls and 21 were boys, whilst in adults the male sex was ten times oftener attacked than the female sex. The diagnosis was often rendered difficult because not all the symptoms developed, as the children generally died soon. As a rule, the age was between three and eight years, therefore young patients must be examined very carefully as severe cerebro-spinal syphilis might often be mistaken for tabes dorsalis. During the last few weeks a method has been worked out which could be employed for ascertaining whether the child was suffering from syphilis or not. This was the process of serum diagnosis but the results were not yet ripe for publication.

Experiments on the Transplantation of Glandular Organs.

Dr. A. Foger, who has been working on the subject of the transplantation of organs, showed at a meeting of the Gesellschaft der Aerzte some specimens which proved that the spleen was not a suitable organ for implanting ovaries into. While six weeks after the operation the follicles were in parts quite visible in the spleen, 16 weeks were sufficient to reduce the implanted ovary into mere scar tissue. Testicles and some young ovaries even disappeared after two months and nothing but connective tissue and a little pigmentation (from the corpus luteum?) showed the site of the original implantation. Kreidl's experiments on implantation of the adrenal body into the spleen also showed that the adrenal body lost its original activity, because three days later no adrenalin was produced. The thyroid gland, however, seemed to have a different relationship to the spleen, as Payer has succeeded in transplanting it into the spleen and proved the persistence of its function after nine months, because when he excised the spleen containing the thyroid gland the animals showed the symptoms of the cachexia which follows thyroidectomy. Moszkowicz, after the example of Payer, recently implanted part of a parenchymatous goitre into the tibia of a child

suffering from myxœdema. The child was now, two months after the operation, much brighter and livelier, and had grown considerably; these symptoms denoted that the implanted gland had adapted itself to its new site and that its activity and the formation of internal secretion were being continued.

Myoma of the Bladder.

Professor Zuckerkandl recently had an opportunity of operating on a man 35 years of age who complained of increased micturition with excessive pains, dysuria, and hæmorrhage from the bladder. A hard tumour was palpable through the abdominal wall but cystoscopy was impossible because of the hæmorrhage which followed the introduction of the instrument. The tumour was found to be quite distinct from the prostate gland. An ulcerated neoplasm was therefore diagnosed and an operation was advised. An anæsthetic having been administered a cystoscopic view of the tumour was at last obtained and the mucous membrane appeared to be congested but not ulcerated. The diagnosis was accordingly reconsidered and an adenoma was now suspected. The tumour was attacked above the symphysis pubis. It was situated within the anterior wall of the bladder, being covered on all sides by the muscular coats but reaching the mucosa at one spot. It was easily removed with the finger and the patient made an uneventful recovery. The microscopical examination of the tumour showed it to be a typical myoma with very few cells. This was one of the rarest types of tumour of the bladder, as there were now only 20 cases on record, including several myosarcomata. Professor Zuckerkandl, in his communication to the Gesellschaft der Aerzte, also said that he had under observation at present a man whose pelvis was filled by a hard elastic mass in connexion with the bladder and prostate gland and in whose subcutaneous tissue numerous small nodules appeared at intervals. Some of them which grew quite recently were excised and found to be myomata.

A Sanatorium for Surgical Patients.

In order to avoid the difficulties which are so often encountered in securing a room for private patients requiring operation a number of practitioners have formed the project of erecting a special sanatorium for surgical purposes entirely by subscription from medical quarters. The proposal has been received with unanimous approval by the members of the profession and it will probably be carried out within a short time. The idea of obtaining a room for the patient is joined with the expectation that the charges will be lower than they are at present in similar institutions because the medical institute will expect nothing more than the normal amortisation of the invested capital (4 per cent.). Any surplus will be devoted to charitable purposes. The site has been chosen and subscriptions have already reached the required limit.

March 2nd.

Obituary.

FRIEDRICH VON ESMARCH,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF KIEL.

THE men who in Germany were the pioneers in bringing surgery to its present high degree of development have gradually died out. Bernhard von Langenbeck, Richard von Volkmann, August Thiersch, and many others have long since passed away, and we have now to regret the death of Professor Friedrich von Esmarch who was one of the few remaining of that brilliant generation. Professor von Esmarch was born in 1823 at Tönning in Schleswig. He was the son of a medical practitioner and was brought up at Flensburg. He studied medicine at Göttingen and Kiel, and on taking his medical degree at the latter university he became an assistant firstly to Professor von Langenbeck and afterwards to his successor in Kiel, the late Professor Stromeyer. He took part in the war against Denmark in 1848 and 1850 as a military surgeon and at the battle of Itzehoe was taken prisoner by the Danes. During the war he assisted his teachers, Professor von Langenbeck and Professor Stromeyer, in the field hospitals at Flensburg. After the war he returned to Kiel and in 1849 was recognised as *privat-docent*. In 1854, when Professor Stromeyer left Kiel for Hanover, he became his successor and held the chair of clinical surgery and the directorship of the surgical clinic until his retirement from practice. The Danish war of 1850 afforded the young surgeon an opportunity of showing his skill on a large scale. The conservative method of treating injuries of the extremities by resection was then for the first time adopted and it was Dr. Esmarch who, by publishing a volume entitled "Resection for Bullet Wounds," made it known to the medical world. The ensuing period from 1864 to 1871 was the era of the great wars against Denmark, Austria, and France in succession and Professor Esmarch took a prominent part in these events so far as the care of the wounded was concerned. In 1866 and in 1870 he was the chief of the reserve hospitals at Berlin and together with the late Professor Virchow introduced the pavilion system of hospital construction the advantages of which had become obvious during the civil war in America. In accordance with his plans a great many lofty pavilions were erected on the Tempelhof field near Berlin, where ample accommodation was afforded to thousands of sick and wounded soldiers. The relief of the victims of war was during all his life one of his principal thoughts. As early as 1869 he published a pamphlet entitled "The Struggle of Humanity Against the Atrocities of War." In it he showed the necessity of first aid on the battlefield and advised that every soldier should carry with him materials for a first-aid dressing and should be instructed how to use them. His practical sympathy was not confined to wounded soldiers but extended also to sufferers from accidents in civil life. He pointed out that many lives were sacrificed because hardly anybody knew what ought to be done in cases of profuse hæmorrhage, compound fracture, and similar urgent conditions. He therefore founded the Samaritan Association of which the aim was to interest people theoretically and practically in rendering first aid. For this association he wrote his "Samaritan Letters" and edited his "Text-book for Samaritans." The movement had a great success so that at present there is scarcely a small town or rural district in Germany without a branch of this association. Apart from his philanthropic work his name will be for ever celebrated for his great discovery of the bloodless method in operations on the extremities, a method with which every medical man is at present familiar and which enabled surgeons to operate with the least possible loss of blood. This method was made public by him in his usual modest way at the Congress of the German Surgical Association in 1873. In addition to those already mentioned his published works included "Handbook of Surgical Technique," "The Antiseptic Method in War," and "Contributions to Practical Surgery." Professor Esmarch married a princess of Schleswig-Holstein, an aunt of the German Emperor. In 1899 he retired from his chair at the university but continued to live at Kiel, where on his eightieth birthday in 1903 he was the object of congratulations on behalf of medical men and philanthropists throughout the whole civilised world.

AUGUSTUS CONSTABLE MAYBURY, D.Sc. LOND., M.R.C.S. ENG., L.S.A., D.P.H., F.G.S.,

ASSOCIATE ROYAL SCHOOL OF MINES.

WE regret to announce the death of Dr. Augustus Constable Maybury who died at his residence in Chelsea on Feb. 16th in his sixty-fifth year. He had been in failing health for some time, which had necessitated his relinquishing his work of tutoring which he loved so much.

Dr. Maybury was the eldest son of the late William Augustus Maybury, a surgeon of Frimley, was born in London, and was educated at the City of London School under the headmastership of Dr. Mortimer. Amongst many distinctions at school he gained the 100 guinea scholarship admitting him to St. Thomas's Hospital as a perpetual student. At the Science and Art Department, South Kensington, he obtained a Royal exhibition of £50 a year for three years, entitling him for proficiency in natural science to free admission to the lectures and chemical and metallurgical laboratories of the Royal School of Mines. He also obtained a silver medal in experimental physics, Queen's prize in inorganic and organic chemistry, experimental physics, zoology, botany, and geology, and a bronze medal in geology. At the Royal School of Mines he obtained first class in experimental physics, mineralogy and geology, natural history, and palæontology, the Royal scholarship for proficiency, and the Edward Forbes medal, and in 1865 was made an associate of the Royal School of Mines. At University College, London, he took the first prize in geology and mineralogy and formed a lifelong friendship with the late Professor Morris.

In the examination of the University of London he showed himself, as was expected, to be among the most distinguished

graduates in science. At the Preliminary Scientific M.B. Examination he obtained honours in chemistry and natural philosophy and in 1865 the B.Sc., passing with honours in organic chemistry, geology, mineralogy, and palæontology. In 1873 he took his D.Sc. at a time when only some 20 could lay claim to the degree, he being one of the first to pass in geology and palæontology.

He then became lecturer on chemistry at the City of London School, the Charterhouse Science School, and the Polytechnic, and was for some time examiner in chemistry also at these institutions. He was lecturer at the London University matriculation classes at St. Thomas's Hospital. He was a Fellow of the Geological Society and a Member of the Geologists Association and British Medical Association, and at one time was registrar to the London Fever Hospital, Sir Shirley F. Murphy being his colleague.

Dr. Maybury wrote many papers on medicine, science, and hygiene, and was the author of "The Student's Chemistry," "Notes on Organic Chemistry," "An Introduction to Animal Physiology," and "Commentary on the Public Health Act, 1891," and was the translator of Ovid's "Epistolae ex Ponto" and "Metamorphoses," and many other classics. He was for some time resident medical officer of the Chelsea, Brompton, and Belgrave Dispensary and of the Farringdon Dispensary. As we have shown, he was a man of high intellectual attainments, being very versatile and having many pursuits. His bent was scientific rather than medical and although he belonged to the medical profession he preferred to follow the less specialised branches of science.

His favourite physical exercise was pedestrianism and he thought lightly of walking 40 or 50 miles. He was an omnivorous reader, being especially fond of literature and the poets. He had great power of concentration and analysis and was always seeking to get to the truth and the bottom of the matter he had in hand. He had many friends and nothing was more enjoyable than to accompany him on his walks and to hear him discourse upon nature and the geological formation of the district through which he was passing.

He was a man beloved by all who came in contact with him for his kindness of heart and disposition, being always ready to advise and to help those in distress. His body was interred in the family vault at Frimley on Feb. 20th.

HENRY FREDERIC MARLEY, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.

WE regret to have to record the death on Jan. 26th, of Henry Frederic Marley, aged 76 years, at Mellingey, St. Issey, Cornwall. Mr. Marley was the last surviving son of the late Mr. Miles Marley, M.D., F.R.C.S., of Cork-street, Burlington-gardens, W., and after studying at the Middlesex Hospital and qualifying in 1853, settled at Padstow, Cornwall, where he continued in the active pursuit of his profession for close on half a century, when an attack of hemiplegia in 1902 compelled him to retire. Mr. Marley was in his day one of the most popular, well known, and respected of the general practitioners in Cornwall, and his practice, which extended over a very wide area, was his one absorbing thought throughout his whole life. He was a skilful surgeon, well up in all branches of the profession, and held in the greatest respect by all with whom he was brought in contact, not only for his kind heart and genial manner but also for his ready help and keenest sympathy for all who needed it. By his death the poor have lost a kind and sympathetic friend and his name will long be remembered and revered amongst those throughout the district where he so long laboured.

GEORGE MONEY SWINHOE, L.R.C.P. LOND., M.R.C.S. ENG.

THE death has occurred at Swindon of Mr. George Money Swinhoe, the principal medical officer of the Great Western Railway Works at Swindon, a post which he had held for over 50 years. The deceased, who was born in Calcutta in 1830, received his medical training at Guy's Hospital and took the diplomas of M.R.C.S. Eng. and L.R.C.P. Lond. in 1851 and 1862 respectively. He served with the 95th Regiment as surgeon throughout the Crimean campaign and was at the battles of the Alma and Inkerman, and at the siege of Sebastopol. At the close of the war in 1856 he was appointed medical officer to the Great Western Railway Works. When he went to Swindon there were 300 members, now they number 15,300, and Mr. Swinhoe had a staff of nine medical men and seven dispensers. He was extremely popular at Swindon and his death is sincerely mourned there. Mr. Swinhoe leaves three sons and seven daughters, with whom much sympathy is felt.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The Council of the Senate proposes to create a professorship in biology for a period of five years at an annual stipend of £700. An anonymous benefactor has offered to contribute £300 a year towards this purpose on the condition that it shall be the duty of the professor to teach or to make researches in heredity and variation. The donor also considers that the year 1909, in which biologists desire to celebrate in Cambridge the centenary of Darwin's birth, is a suitable occasion for founding such a chair.—The following degrees were conferred on Feb. 27th:—

M.D.—J. P. Candler, Corpus Christi.
M.B., B.C.—E. C. Sparrow and J. H. Trench, Trinity.
M.B.—G. Browse, Clare.

TRINITY COLLEGE, DUBLIN.—At the final examination in medicine in Hilary term the following were successful:—

Part II.—Charles W. Laird (passed on high marks), Johannes C. Pretorius, Arthur H. Laird, Thomas P. Dowley, Albert V. J. Richardson, William E. Hopkins, William A. Nicholson, Robert de C. Wheeler, James F. Clarke, and Herbert V. Stanley.

MIDDLESEX HOSPITAL.—The annual meeting of the court of governors was held at the hospital on Feb. 27th, Sir Richard Douglas Powell being in the chair. After the presentation of the report for 1907 by Lord Cheylesmore, chairman of the weekly board, Mr. A. Pearce Gould, senior surgeon of the hospital, seconded its adoption and referred to the regret that the staff felt at the resignation of Mr. Andrew Clark who had for so many years served the hospital with such efficiency. He referred at length to the report of the cancer department, and in the course of his remarks said that the director of the research laboratory, Dr. W. S. Lazarus-Barlow, had been selected to deliver an important course of lectures at the Royal College of Physicians of London in 1909, and that these lectures would deal with some of the results of his labours in the laboratory. One of their workers, Mr. W. Sampson Handley, had three times been elected one of the Hunterian professors of the Royal College of Surgeons of England to give lectures dealing with the results of his researches, and this year another of their laboratory staff, Dr. Victor Bonney, had also been elected as Hunterian professor and had given a course of lectures detailing the results of his investigations. Two workers in the laboratory, Mr. Handley and Mr. Gordon Taylor, had been elected on the honorary staff of the hospital, and Dr. A. Leitch had quite recently been chosen for the very important post of director of the newly established cancer research laboratory in Dundee. The researches of Mr. Handley into the mode by which malignant disease spread in the body had had a practical bearing on the operative treatment of the disease. In his lectures at the Royal College of Surgeons only the previous week Dr. Bonney had thrown considerable light upon the condition of the living tissues of the body preceding the outbreak of cancer. It had long been known that certain non-cancerous diseases were frequently the prelude of an attack of cancer. For example, chronic inflammation of the surface of the tongue was known to be a very frequent precursor of cancer of that organ and similar observations had been made in some other parts of the body, but Dr. Bonney had shown that cancer in the human subject never attacked, in the first instance, perfectly healthy tissues but that in all cases it was preceded by certain other definite tissue changes. This was an exceedingly important fact. It did not reveal the actual cause of cancer but it certainly was a very important step forward, and it emphasised the extreme importance of conserving with the utmost care the perfect integrity of the tissues of the human body. The court then elected Mr. Andrew Clark as a consulting surgeon of the hospital and after some routine business the governors proceeded to the hospital chapel where an office of dedication was sung by the chaplain with the choir under the direction of Mr. F. H. Stamper, organist. In the course of the service Lord Cheylesmore unveiled a

window to the memory of the late Sir Arthur Townley Watson, Bart., K.C., Vice-President. The subject of the window, which is the work of Messrs. Clayton and Bell, is the Resurrection of Our Lord, and it completes the series of memorial windows in the nave and choir.

UNIVERSITY COLLEGE, BRISTOL.—The inauguration of the Public Health Laboratory will take place on March 20th, at 4.30 P.M., when addresses will be given on "The Sanitary Service of the Territorial Army," by Lieutenant-Colonel R. H. Firth, R.A.M.C., and on "Newer Methods in the Diagnosis of Public Health Problems," by Professor George Dreyer of Oxford. The inaugural dinner will take place in the evening at the Queen's Hotel, Clifton.

UNIVERSITY COLLEGE, LONDON.—The Chancellor of the University of London, Lord Rosebery, will visit University College on the afternoon on Thursday, March 26th, and will formally open the new libraries and the new south wing, which includes lecture rooms for the Faculty of Arts, the departments of geology, hygiene, and experimental psychology, also large extensions of the departments of applied mathematics, of mechanical, electrical, and municipal engineering, and accommodation for the new hydraulic laboratory.

LITERARY INTELLIGENCE.—Mr. Henry Frowde and Messrs. Chapman and Hall are publishing yet another edition of Charles Dickens's works. The new issue will be in 20 volumes and will be known as the "Eighteenpenny Illustrated Edition," the title being derived from the price of the volumes bound in cloth.—A book on "Practical Housing," by Mr. J. S. Nettlefold, will be issued in a few days by the Garden City Press, Limited, 6, Bloomsbury-square, London, W.C. Mr. Nettlefold has had large experience as chairman for some years of the corporation housing committee of an important city and has also studied the subject at home and abroad. The book will be sold at 1s. net and will contain a large number of illustrations descriptive of housing and town planning schemes in this and other countries.—A third edition of "Diseases of the Rectum and Anus," by MR. F. Swinford Edwards, surgeon to the West London Hospital, is passing through the press. A new work on "Hernia" is announced from the pen of Mr. R. W. Murray, surgeon to the David Lewis Northern Hospital, Liverpool. Both these works will be published in the near future by Messrs. J. and A. Churchill. New editions will be issued by the same firm of "Uric Acid as a Factor in the Causation of Disease," by Dr. Alexander Haig, and "Practical Pharmacy," by Mr. E. W. Lucas.

CHELSEA CLINICAL SOCIETY.—The eleventh annual dinner of this society took place at the Gaiety Restaurant, London, on Feb. 27th, Dr. J. H. Dauber, the President, being in the chair. In proposing the toast of "The Chelsea Clinical Society" the President alluded to the satisfactory attendance of members at the meetings of the society and said that in his opinion the popularity of these gatherings might be in part ascribed to the fact that smoking was allowed and that they were not afraid of adding alcohol to the list of refreshments supplied. He suggested that other societies would do well to take a leaf out of their book and recognise that it was neither unusual nor unreasonable for men to expect to be able to smoke in the evening. In regard to the idea that had been mooted of societies like theirs joining the Royal Society of Medicine and going to 20, Hanover-square, he declared outright that in his opinion it would be the ruin of such local societies; it seemed to be overlooked that decentralisation was as important as centralisation. He concluded his remarks with a spirited appeal for the organisation of the medical profession so that their work should be properly recognised. The public seemed to think that it was only necessary to start any kind of hospital and then call on the medical profession to work it. It was just as reasonable to build a ship and then ask for officers and men to work it without fee or reward, but the public worked on the accepted principle that if medical institutions were provided the profession would "run the show" for nothing. Amongst the other speakers were Mr. A. F. Penny, Dr. J. Barry Ball, Mr. R Lake, and Dr. F. J. McCann. One of the most amusing of the entertainments provided was that by Surgeon H. Hunt, R.N., of H.M.S. *Blake*, who with extraordinary rapidity sketched on a large screen a humorous caricature of Dr. Austin E. Cooper, the treasurer of the society, administering an anæsthetic. Surgeon Hunt also delighted his audience by sketching from life the President and Dr. Barry Ball.

Mr. Charters J. Symonds delivered the third Lettsomian lecture for 1908 before the Medical Society of London on March 2nd.

LONGEVITY.—On March 1st Mrs. Scammell, of East Knoyle, Wiltshire, celebrated the hundredth anniversary of her birthday.

BRISTOL MEDICAL DRAMATIC CLUB.—The members of the Bristol Medical Dramatic Club gave their annual performances recently at All Saints' Hall, Clifton. The piece selected was *Held by the Enemy*, by William Gillette. The performances were in aid of the University Union and as there were large attendances it is thought that a considerable sum will be raised.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The usual monthly meeting of the executive committee of this society was held at 6, Catherine-street, Strand, London, W.C., on Feb. 21st, Dr. F. de Havilland Hall being in the chair. There were present Dr. F. J. Allan, Dr. F. S. Palmer, Mr. J. Brindley James, Dr. H. A. Sansom, Mr. F. S. Edwards, and Dr. J. B. Ball. The accounts presented showed a large increase in the amount of sickness pay caused by the present epidemic of influenza. As on previous occasions, a large number of medical men seem to be suffering from this troublesome malady, but the claims are generally of short duration and make but a small inroad on the large reserves of the society. The number of members permanently incapacitated and drawing sick pay (usually 100 guineas a year) is still growing but special and full reserves have been made for them at each valuation of the society's business. Prospectuses and all further particulars will be forwarded on application to Mr. F. Addiscott, secretary, Medical Sickness and Accident Society, 33, Chancery-lane, London, W.C.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—The annual report of this hospital showed that 1701 patients had been received into the hospital during the past year and 1996 had been attended and nursed in their own homes. The expenditure had amounted to £6451, but the total income had been £5778 only, the balance, £673, having had to be met by trenching upon capital, the amount of which, however, was so small as to produce about £800 per annum only. The extension of the nurses' home was nearing completion and it was hoped it would be open by midsummer; much needed additional accommodation would then be available. The residential college for students was also being enlarged so as to provide for 16 medical students instead of six as at present, with a view to meet the recommendations of the General Medical Council on the instruction of students in practical midwifery. The addition to the nurses' home will provide for 31 more nurses. The chairman strongly urged the need of more regular support to maintain the hospital efficiently and earnestly appealed for donations towards the sum still required for the extension of the nurses' home.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Health Officers' Bill.

Sir WALTER FOSTER has presented a Bill in the House of Commons "to amend the law relating to the qualifications and tenure of the office of medical officers of health." The Bill was read a first time and as a matter of course, was ordered to be printed. Sir WALTER FOSTER has the support of Sir JOHN BATTY TUKE, Sir FRANCIS POWELL, and Mr. G. J. COOPER in submitting the Bill to the House.

Parochial Medical Officers in Scotland.

The Scottish Poor Law Medical Officers' Association has petitioned Parliament for legislation to meet the grievances under which its work is carried on at present.

Nurses' Registration Bill.

Mr. MUNRO-FERGUSON'S Nurses' Registration (No. 2) Bill has been printed. The Bill provides for the institution of a general nursing register, and of a supplementary register of asylum-trained nurses to be called the Mental Nurses Register. Provision is made for the registration of persons of suitable training and experience who are in actual

bond-fide practice as nurses. At the expiration of two years after the passing of the Bill into law it is proposed that any nurse claiming to be certified under the Statute shall have completed a three years' term of training in the wards of a hospital or Poor-law infirmary approved of by the General Council of Nursing Education and Registration of the United Kingdom—a new body-corporate set up by the measure. Nurses on the Mental Nurses Register must hold the certificate of the Medico-Psychological Association or its equivalent. Mr. MUNRO-FERGUSON'S measure proposes a fine not exceeding £10 as the penalty on an uncertified person who poses as a registered nurse. Another important provision of the Bill is that after it comes into force "no person shall be entitled to sue for or recover any charge in any court of law for any nursing assistance or attendance on the sick unless such person proves that he or she is registered under this Act." In another clause it is, however, laid down that the measure "shall not apply to any person attending the sick for hire who does not in any way assume to be a registered nurse under this Act." A provisional council of 11 members is to be constituted when the measure passes to regulate the admission to the register of persons already in practice as trained nurses. However, the Bill provides that later its place is to be taken by "The General Council of Nursing Education and Registration of the United Kingdom." It is proposed that this council shall consist of 19 persons. They are enumerated as follows: (*a*) Three persons appointed by the Privy Council to represent the training schools for nurses in the United Kingdom; (*b*) one registered medical practitioner to be appointed by the General Council of Medical Education and Registration of the United Kingdom; (*c*) three registered medical practitioners to be appointed by the British Medical Association, one to be a physician, one a surgeon, and one a general practitioner; (*d*) one registered medical practitioner to be appointed by the Medico-Psychological Association; (*e*) ten registered nurses to be elected as the direct representatives of the registered nurses of the United Kingdom; and (*f*) one past or present matron of a public hospital for the insane to be elected by the nurses on the Mental Nurses Register.

Sale of Whisky Bill.

Until the Royal Commission on Whisky has reported, it cannot be seriously supposed that Parliament will embark on any legislation dealing with the vexed question of "pot still" and "patent still." The object of Mr. WILLIAMSON'S Sale of Whisky Bill can thus only be regarded as the formulation of the views of a large section of the community on this subject and not as an attempt at gaining immediate legislation. In a memorandum attached to the Bill, Mr. WILLIAMSON states that its object is to secure to purchasers of whisky a clear statement whether it is a whisky made in a pot still from pure malt, or of malt and corn, or is in part a spirit made in a patent still from unmalted grain. To carry out this object the Bill proposes to enact that all whisky shall, from the time of leaving the distillery till sold to the consumer, be described by a mark or label on the cask or bottle as "whisky" or "blend of whisky and patent still spirit," as the case may be. Provision is made for similar information being given to persons purchasing whisky on draught. Mr. WILLIAMSON, who represents a constituency in the north of Scotland where distilling is an important industry, has on former occasions introduced Bills dealing with the sale of whisky.

Prohibition of Medical Practice by Companies Bill.

The Prohibition of Medical Practice by Companies Bill which Sir JOHN BATTY TUKE is endeavouring to pilot through the House of Commons is the same measure which Lord HYLTON induced the House of Lords to pass last year. A very strong case indeed was made out for it before a select committee of peers last summer and it reached the Commons without encountering any serious obstacle. However, the congestion of business prevented its progress there. The passage of the Bill is earnestly desired by the General Medical Council in order to restrain the evils of the incursions into the domain of medical practice by unqualified persons. It is hoped that with the Bill in the hands of so well-known a medical man as Sir JOHN BATTY TUKE no serious opposition will be raised to its progress. Last year the Government adopted a friendly attitude to the measure in the House of Lords. Nothing has become known to afford ground for supposing that it will regard the measure with a less benevolent eye this year. A memorandum has been prepared explaining the precise changes which the Bill proposes to introduce into the law. It runs as follows: "The object of this Bill is to prohibit persons, who are not by examination and registration legally qualified to practise medicine and surgery, from carrying on business as medical practitioners by means of companies formed under the Joint Stock Companies Acts, under the shelter of which they are able to evade liabilities attaching to them as individuals. The Medical Acts of 1858 to 1886 prescribe the qualifications which entitle persons to be entered on the Medical Register as duly qualified medical practitioners, and provide means for maintaining a proper standard of proficiency in the qualifying examinations in medicine, surgery, and midwifery; and these Acts impose disabilities on persons who carry on medical practice without being duly qualified, and impose penalties on unqualified persons who assume a title or otherwise hold themselves out as duly qualified medical practitioners. In order to avoid these disabilities and penalties, unqualified persons have in recent years been in the habit of carrying on medical practice in the name of a joint-stock company formed by them for the purpose, and such companies have been, and are, carrying on medical practice on a large scale, especially among the poorer classes. In some cases also persons who have been struck off the Register for misconduct have formed joint-stock companies and continued to practise under cover of the company. This Bill therefore declares that whatever would be an offence under the Medical Acts if committed by an individual shall also be an offence when committed by a company. The object of the Bill is thus to make it unlawful for an incorporated company to practise as, or carry on the business or profession of, a physician, surgeon, or medical practitioner. The Bill applies to existing companies, but does not apply to companies formed to carry on business as manufacturers or sellers of medical, surgical, or dental appliances or preparations. Nothing in the Bill will prevent a limited liability company from carrying on a convalescent home, hydropathic establishment, or other institution, of which the primary object is not the actual conduct of medical practice by unqualified persons; or will interfere with friendly and other societies, established for affording mutual relief in sickness and old age, or for assisting their members to obtain the services of duly qualified medical practitioners."

Restriction of Dental Practice by Companies.

A measure to restrict dental practice by companies was promoted last year, along with a Bill to prohibit medical practice on these lines. However, the Dental Bill received a less kind fate than the medical one. Persons who were carrying on dentistry by joint-stock companies offered a determined opposition to the measure, alleging that they were meeting the demands of the poorer classes of the community. The result was to create an obstacle to the progress of the Bill. It has not yet been re-introduced this session.

The Infant Life Protection Committee.

The evidence which has been given to the select committee of the House of Commons on Infant Life Protection has been strongly in favour of the extension of the registration and inspection of the Infant Life Protection Act of 1897 to "one-child homes."—Mr. JAMES R. MOTION, the inspector of poor in Glasgow, who was a witness before the Committee last week, made a sensational statement with regard to the existence of a class of women in Glasgow whom he called "midwives" and whose business he regarded as being of "a shady character." He spoke of "several women" being engaged in the business. These women, he said, took in girls for confinement, and in consideration of a lump sum of money agreed to provide for the adoption of the child.—Lord ROBERT CECIL questioned the witness closely as to the subsequent fate of the child.—Mr. MOTION replied that the "midwife" advertised for a foster-parent. A woman appeared. She got the child and a promise of 5*s.* a week for its upkeep. She returned at the end of the week and got another 5*s.* However, when she appeared again after the third or fourth week "the bird had flown in the shape of the midwife." Mr. MOTION thought that this state of affairs led to grave abuse. On one point he was emphatic. In his view no person except a medical man should be allowed to certify that a child had been still-born in connexion with its burial. It should be added that he stated that the class of "midwives" he referred to was not the class created by the Midwives Act.—Miss FRANCES ZANETTI, an inspector under the Infant Life Protection Act, also gave evidence of a startling character. She pointed out to the Committee that the majority of children given out to nurse were placed in "one-child homes." Thus the Act of 1897 with its inspection did not apply to them and gave them no protection. Neglect, improper feeding, and ignorant treatment of infants were most noticeable in these one-child cases.

Opposition to the Nurses' Registration Bills.

TWO Members of the House of Commons, Mr. ANNAN BRYCE and Mr. RAWLINSON, have both given notice that they will move the rejection of the Nurses (Registration) Bill (Mr. CLAUDE HAY'S measure), and of the Nurses' Registration (No. 2) Bill (Mr. MUNRO-FERGUSON'S measure) when they come up for second reading.

HOUSE OF COMMONS.

WEDNESDAY, FEB. 26TH.

Medical Inspection of School Children in Ireland.

Mr. JEREMIAH MACVEAGH asked the Chief Secretary to the Lord Lieutenant of Ireland whether his attention had been called to the resolution of the Irish Committee of the British Medical Association urging the necessity of the medical inspection of school children in Ireland on the lines already adopted by legislation with regard to England; and whether, having regard to the fact that every argument for such inspection in England applied with even greater force to Ireland, he would consider whether steps could be taken to give effect to this recommendation.—The ATTORNEY-GENERAL for IRELAND (Mr. CHERRY) answered: My right honourable friend's attention has been called to the resolution in question and the matter has been engaging his consideration. My right honourable friend agrees with the Commissioners of National Education that the medical inspection of school children in Ireland would be desirable, but he is confronted with the fact that under the English legislation the duty of providing for the medical inspection of children is a duty of the local authority. The effect of this enactment is to require the local authority to find from the rates the funds necessary to defray the charges of this new service. The matter will continue to engage my right honourable friend's attention.

The Royal Commission on Whisky.

Answering Mr. DEVLIN Mr. BURNS said: The Royal Commission on Whisky consists of Lord James of Hereford, of whose legal knowledge and experience in dealing with conflicting trade interests it is unnecessary that I should say anything; of two officials representing the Board of Inland Revenue and the Local Government Board; of two gentlemen nominated by the Secretary for Scotland and the Irish Local Government Board respectively; and of three other members who are experienced men possessing scientific or professional attainments which should enable them to form a sound judgment on the various scientific matters referred to them. I carefully considered the question whether representatives of the trade interests involved should be placed on the Commission and I came to the conclusion that the better course was to refer the whole question to impartial men, none of whom were in any way committed to trade views or nominated by the trade but who would take evidence as to the trade interests concerned and consider not only these interests but also those of the consumer and of the public health in relation to the matter. I cannot in answer to a question go into details respecting the members of the Commission, but I may say that I am not aware that a majority of them are Scotsmen or men favourable to the Scottish interests involved. I have not received expressions of dissatisfaction at the constitution of the Commission. I do not think there is any ground for considering that Ireland has been unfairly treated in the matter. The Irish Local Government Board was asked to nominate a member and Sir Henry Robinson, acting on behalf of the Board, nominated Professor Adeney who, I understand, has been connected with Ireland for more than 30 years. I see no sufficient reason for advising any alteration in the constitution of the Commission.

THURSDAY, FEB. 27TH.

The Sale of Tuberculous Meat.

Mr. CATHCART WASON asked the honourable Member for South Somerset, as representing the President of the Board of Agriculture, whether he was aware that cattle dying from tuberculous and other diseases were often exposed for public sale in public yards; that out of 2967 carcasses condemned in Glasgow as being diseased and unfit for food not one was condemned alive; and whether, in view of the danger to life, especially infant life, involved in the spread of disease by meat and milk, he would consider the question of scheduling tuberculosis as a contagious and infectious disease.—Sir EDWARD STRACHEY replied: Representations have from time to time been made to us to the effect indicated in the first part of the question, and I believe that the figures cited by my honourable friend are correct. But the exposure for sale of an animal which is diseased or unfit for the food of man is an offence under the Public Health Acts which falls to be dealt with by the central and local authorities under these Acts and not by the Board of Agriculture. We have, therefore, no official information on the subject. The suggestion that tuberculosis should be dealt with under the Diseases of Animals Acts has frequently been considered, but it has never hitherto been found feasible to give effect to it. Lord Carrington is, however, in communication with the President of the Local Government Board on the subject.

Sanatoriums for Post Office Employees.

Mr. ALDEN asked the Postmaster-General whether any financial or other support had been given by his department to the voluntary scheme which is to provide sanatoriums for the Post Office employees suffering from consumption.—Mr. BUXTON answered: There is no fund at the disposal of my department out of which regular financial support could be given to the voluntary scheme referred to by the honourable Member. But I have sanctioned contributions to the building fund of the sanatorium from the accumulated "fine" funds at certain post offices. The scheme has my sympathy and support, and assistance is afforded to it by means of an arrangement for facilitating the collection of subscriptions of members by deductions from their official salaries and in other ways.

Additional Medical Inspector at the Factory Department.

Answering Mr. TENNANT, Mr. GLADSTONE (the Home Secretary) said that the Factory Department of the Home Office would be strengthened during the next financial year. The headquarters staff would be strengthened by the addition of a second medical inspector.

St. John and St. Andrew Ambulance Certificates.

Major ANSTRUTHER-GRAY asked the President of the Board of Trade whether it was contemplated that the St. John Ambulance Association would continue to issue certificates of proficiency in first aid to Scottish candidates for examination as masters and mates at the conclusion of the present course.—Mr. KEARLEY (Parliamentary Secretary to the Board of Trade) forwarded the following answer: The issue by the St. John Ambulance Association of certificates of proficiency in first aid to candidates for examination in Scotland for certificates as master or mate is not contemplated.

Major ANSTRUTHER-GRAY asked the President of the Board of Trade what was the present number of recognised lecturers under the St. Andrew Association in Scotland; and if their services were available at any ports besides Glasgow, Dundee, Leith, and Aberdeen.—Mr. KEARLEY replied (by written answer): I am not aware what is the present number of recognised lecturers under the St. Andrew Ambulance Association in Scotland. The ports in Scotland at which candidates for certificates as master or mate can be instructed in first aid are those mentioned in the question.

FRIDAY, FEB. 28TH.

The Notification of Births Act.

Sir WILLIAM COLLINS asked the President of the Local Government Board how many of the local authorities to whom the Notification of Births Act, 1907, was applicable had adopted that Act in England and Wales, Scotland, and Ireland respectively; and whether the Local Government Board had in any case taken action under Clause 3 of the Act, by putting it in force although it had not been adopted by the local authority.—Mr. BURNS sent the following written answer: In England and Wales, with which only I am concerned in this matter, 113 local authorities have adopted the Act. The answer to the second part of the question is in the negative.

Infant Life Protection.

Mr. GULLAND asked the Secretary of State for the Home Department whether he could say how many local authorities in England and Wales, Scotland, and Ireland had appointed special inspectors under the Infant Life Protection Act, 1897, and how many had not; how many cases had been registered in each year since the passing of the Act; and if he could not at once give this information whether he would grant a return.—Mr. GLADSTONE replied (by written answer): I have not got this information, but I shall be glad to obtain it and give it as a return. I will communicate with my honourable friend as to the form the return should take.

MONDAY, MARCH 2ND.

Tuberculosis in the Army.

Colonel SEELY asked the Secretary of State for War whether, in the event of subscriptions being forthcoming from private sources to insure treatment in hospitals or sanatoriums for soldiers discharged from the army suffering from tuberculosis, he would be prepared to give a substantial grant in aid.—Mr. HALDANE replied: The question of recommending a substantial subscription from army funds would certainly, so far as I am concerned, be favourably considered. It is impossible for me to say more at this stage.

Mr. SUMMERBELL asked the Secretary of State for War when the report of the committee as to the treatment of soldiers found to be suffering from tuberculosis would be laid upon the table of the House.—Mr. HALDANE answered: The report of the committee will shortly be laid on the table.

TUESDAY, MARCH 3RD.

Glanders and Man.

Colonel WALKER asked the honourable Member for South Somerset, as representing the President of the Board of Agriculture, whether his attention had been drawn to the report of an inquest held in Southwark on a horse-dealer who died from glanders; and whether he would, in view of the number of cases reported of horses attacked by that disease in London and the danger that existed of infection to human beings, ask the Board of Agriculture, with a view to the rapid extinction of glanders and farcy, to issue an order for the compulsory application of the mallein test by all qualified veterinary surgeons, as well as by the three inspectors at present appointed under the Act.—Sir EDWARD STRACHEY replied: My noble friend has seen the report to which the honourable and gallant Member refers. The Glanders and Farcy Order of 1907 authorises the veterinary inspectors of the local authorities to apply the mallein test with the consent of the owner to horses which are suspected of glanders or which have been in contact with others affected with that disease and which have in consequence been placed under detention, but we do not think it would be desirable to extend this power to all qualified veterinary surgeons as suggested.

Asiatic Firemen and Beri-beri.

Mr. MACPHERSON asked the President of the Board of Trade whether he was aware that medical opinion held that beri-beri was a disease due to the want of proper and sufficient food; whether his attention had been called to the death of an Asiatic fireman who was serving on the British steamer *Teesta* and who died from beri-beri on June 2nd, 1907; whether he was in a position to say if any inquiry was held in this case; and if it was shown that the food provided for the crew of the *Teesta* was adequate.—Mr. LLOYD GEORGE replied (by written answer): The cause of beri-beri does not appear to have been very definitely ascertained, but probably bad and insufficient food predisposes to the disease. The Board of Trade is in communication with the Royal College of Physicians on the subject. The fireman referred to in the question is probably Mozaffer Aliey, fireman of the *Teesta*, who died whilst a passenger on board the *Gwalior*. A return was received from the Negapatam Port Officer containing a certificate of death from beri-beri signed by the medical officer. The *Teesta* is employed in the coasting trade of India under local management and is run under the regulations of the Government of India as regards victualling and crew space. I have no reason to believe that those regulations have not been complied with.

A very large number of questions were also addressed to the President of the Board of Trade bearing on individual cases of Asiatic firemen who had died from diseases of the chest and lungs, heart failure, beri-beri, &c., but Mr. LLOYD GEORGE intimated that inquiry was being made into the circumstances of the cases.

WEDNESDAY, MARCH 4TH.

Malta Fever.

Sir WILLIAM COLLINS asked the Secretary of State for War what was the number of cases of Malta fever occurring among the troops in Malta in the years 1905, 1906, and 1907 respectively; how many of the cases in each year terminated fatally; whether the reduction in the number of cases was attributable to the prohibition of the use of goats' milk or to any method of protective inoculation; and whether the disease continued to prevail among the native population.—Mr. HALDANE furnished the following reply: The number of cases of Malta fever occurring among the troops in Malta and the number of deaths during the years 1905, 1906, and 1907 was as follows:—

	Cases.	Deaths.
1905	643	16
1906	151	4
1907	11	1

The reduction in the number of cases of Malta fever among the troops in Malta is solely attributable to the prohibition of the use of goats' milk in barracks and hospitals. Protective inoculation has not been used for the troops. The disease, according to information received from the Board of Health in Malta, continues to prevail among the native population without any change or abatement.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BOYES, WILLIAM ISAAC, M.B., Ch.B. Melb., M.R.C.S., has been appointed Officer of Health for the Borough of Wangaratta, Victoria, Australia.

BRISCOE, J. CHARLTON, M.D. Lond., M.R.C.P. Lond., has been appointed Assistant Physician to King's College Hospital.

CLARKE, PERCY GOWAN, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Officer of Health for the Rosedale and Denison Riding of the Shire of Rosedale, Victoria, Australia.

DILLON, M., L.R.C.S. Irel., L.A.H., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Rathmore District of the county of Kerry.

DOCKER, WYATT BRISTOW, M.B., Ch.B. Melb., has been appointed Officer of Health for the Shire of Huroa, Victoria, Australia.

EDINGTON, D. C., M.D. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Penrith District of the county of Cumberland.

FARRIES, JOHN STOTHART, L.R.C.P. & S. Edin., has been appointed Medical Superintendent of the Sandwell Hall Asylum for the Feeble-minded, Handsworth, Staffs.

HARDY, ARTHUR REGINALD, L.M. & S., L.S.A. Lond., has been appointed Resident Medical Officer at the Gateforth Open-air Sanatorium (near Selby) in connexion with the Leeds Tuberculosis Association.

HARMAN, G. R., L.M., L.S. Dub., has been appointed Certifying Surgeon under the Factory and Workshop Act for the St. German's District of the county of Cornwall.

HINE, T. G. MACAULAY, M.D., B.C. Cantab., has been appointed Honorary Physician to the St. Pancras and Northern Dispensary.

HOLLOW, JOHN THOMAS, M.B. Melb., has been appointed Medical Superintendent of the Metropolitan Hospital for the Insane at Kew, Victoria, Australia.

JOHNSTON, JOHN, M.D. Glasg., has been appointed Officer of Health for the town of Williamstown, Victoria, Australia.

MOORE, P. M., M.B., B.S. Cantab., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Strangford District of the county of Down.

MORTIMER, JOHN, M.B. Lond., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Exeter Dispensary.

SLEEMAN, JAMES HENRY, M.B., Ch.B. Melb., has been appointed Officer of Health for the Port of Portland, Victoria, Australia.

THOMAS, FRANK LESLIE, M.B., B.S. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer to the Barnstaple Union.

WORGER, RICHARD GEORGE, L.R.C.P. Lond., M.R.C.S., L.S.A., has been re-appointed Medical Officer and Public Vaccinator for the Kilmersdon District of the Frome (Somerset) Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

AYLESBURY, BUCKS COUNTY LUNATIC ASYLUM, Stone.—Assistant Medical Officer. Salary £150 per annum, with board and apartments.

BEDFORD COUNTY HOSPITAL.—House Physician. Salary £60 per annum, with apartments, board, and laundry.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright-street.—Clinical Assistant. Salary at rate of 52 guineas per annum.

BRADFORD ROYAL INFIRMARY.—House Physician and House Surgeon, unmarried. Salaries £100 per annum, with board and residence.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Assistant Pathologist. Salary £80 per annum, with board, residence, and laundry.

BROMLEY (KENT), BOROUGH OF.—School Medical Officer. Salary £200 per annum, rising to £300.

BUCKS COUNTY EDUCATION COMMITTEE.—Education Medical Officer. Salary £300 per annum, with expenses.

CARDIFF INFIRMARY (GENERAL HOSPITAL).—House Physician for six months. Salary £30, with board, residence, and laundry.

CARLISLE, CUMBERLAND INFIRMARY.—Resident Medical Officer. Salary at rate of £80 and £100 per annum, with board, lodging, and washing.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Physician to Out-patients.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—Resident Medical Officer for four months, renewable. Salary at rate of £50 per annum, with board, lodging, and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House Surgeon. Salary £60 per annum, with rooms, board, washing, and attendance.

DUBLIN, ROYAL VICTORIA EYE AND EAR HOSPITAL, Adelaide-road.—House Surgeon. Salary £40 per annum, with board and residence.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—House Surgeon and Assistant House Surgeon. Salaries £80 and £40 respectively, with board and lodging.

EXMINSTER, DEVON COUNTY ASYLUM.—Third Assistant Medical Officer. Salary £140, rising to £150, with board, lodging, and washing.

FINCHLEY URBAN DISTRICT COUNCIL.—Medical Officer of Health and Superintendent of the Hospital. Salary £300 per annum, rising to £400.

HAMPSHIRE COUNTY COUNCIL.—Medical Officer of Health. Salary £700 net.

HAMPSTEAD GENERAL HOSPITAL, WITH WHICH IS AMALGAMATED THE NORTH-WEST LONDON HOSPITAL.—Three Physicians and two Surgeons in charge of the Out-patients' Department in Kentish Town. Also two Anæsthetists at the Hampstead Hospital.

HASTINGS, ST. LEONARDS AND EAST SUSSEX HOSPITAL.—Assistant House Surgeon for six months. Salary £20, with residence, board, and washing.

LEAMINGTON, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, washing, and apartments.

LEYTON, WALTHAMSTOW, AND WANSTEAD CHILDREN'S GENERAL HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with board, rooms, and washing.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Salary £30, with board and lodging.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant to the Resident Medical Officer. Salary £120 per annum, with residence and board.

LONDON TEMPERANCE HOSPITAL.—Assistant Resident Medical Officer for six months. Salary at rate of 50 guineas per annum, with board and residence. Also Assistant House Surgeon for six months. Salary at rate of £75 per annum.

LOWESTOFT HOSPITAL.—House Surgeon, unmarried. Salary at rate of £80 per annum, with board, lodging, and washing.

MERTHYR TYDFIL, BOROUGH OF.—Medical Inspector of School Children. Salary £200, advancing to £300.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon, all for six months. Salaries of two former at rate of £40 a year each, and of two latter at rate of £20 a year each. Also Pathologist. Salary at rate of £100 per annum. Also Resident Anæsthetist. Salary at rate of £90 per annum.

NORWICH, CITY AND COUNTY OF.—School Medical Officer and Assistant Medical Officer of Health. Salary £250, rising to £300 per annum.

NORWICH, NORFOLK COUNTY ASYLUM, Thorpe.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum and all found.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

ROCHESTER, SAINT BARTHOLOMEW'S HOSPITAL.—House Physician. Salary £110 per annum, with board and residence.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Salary £80 per annum, with rooms, commons, and washing.

ROYAL FREE HOSPITAL, GRAY'S INN-ROAD, W.C.—Senior Resident Medical Officer. Salary £100 per annum, with board, residence, and washing. Also Resident House Surgeon for six months. Board, &c., provided.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL, Great Portland-street, W.—House Surgeon, unmarried. Salary £250 per annum.

ROYAL NAVY, MEDICAL DEPARTMENT.—Examination for not less than 15 Commissions.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Demonstrator of Physiology. Salary at rate of £150 per annum.

ST. MARY'S HOSPITAL, PADDINGTON, W.—Medical Officer in Charge of the X Ray Department. Salary £100 per annum.

SALFORD ROYAL HOSPITAL.—House Surgeon, also Junior House Surgeon, both for six months. Salaries at rate of £60 and £50 per annum respectively, with board and residence.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £90 per annum, with residence, board, and washing.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Two House Physicians and three House Surgeons for six months. Board, lodging, and laundry allowance provided.

WESTMINSTER GENERAL DISPENSARY.—Resident Medical Officer. Salary at rate of £120 per annum, with rooms, gas, coal, and attendance.

YORK, NORTH RIDING LUNATIC ASYLUM, Clifton.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, apartments, washing, and attendance.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Bridlington, in the county of York; at Shoreham, in the county of Sussex; at Stoneyford, in the county of Kilkenny; at Inistioge, in the county of Kilkenny; and at Elmley, in the county of Kent.

Births, Marriages, and Deaths.

BIRTHS.

COLDSTREAM.—On Feb. 28th, at Belford, Northumberland, the wife of George Probyn Coldstream, M.B., C.M., of a son.

LE FLEMING.—On Feb. 26th, at Wimborne, to Dr. and Mrs. E. K. Le Fleming—a son.

SHAW.—On Feb. 28th, at King-street, Great Yarmouth, the wife of Raymond Henry Shaw, M.S., M.B., of a son.

STEELE-PERKINS.—On Feb. 28th, at Exeter, the wife of John Shirley Steele-Perkins, B.A., M.B., B.C. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., of a son.

MARRIAGE.

DEAN—WILSON.—On Feb. 29th, at All Saints', Ennismore-gardens, Henry Roy Dean, M.A., M.B. Oxon., M.R.C.P. Lond., to Athanasia Irene, fourth daughter of the late Charles Arthur Wilson.

DEATHS.

AYRE.—On Feb. 29th, after influenza, John Joseph Ayre, M.R.C.S., of Colne, Lancashire, in his 97th year.

ELLETT.—On Feb. 28th, at the Metropolitan Hospital, London, George Grigson Ellett, M.D., aged 31 years.

HALLAM.—On Feb. 22nd, at Monte, Grand Canary, William Henry Hallam, L.R.C.P. Edin., M.R.C.S. Eng., D.P.H. R.C.P.I.

HARRISON.—At Lower Berkeley-street, Portman-square, Reginald Harrison, F.R.C.S., aged 70 years.

MACLEOD.—On March 3rd, Murdoch Donald Macleod, M.B., of Beverley, East Yorks, late Medical Superintendent Officer of the East Riding Asylum.

MOULD.—On Feb. 22nd, at Adeline-road, Boscombe, Brigade Surgeon (retired) A. M. S. Thomas Rawlings Mould.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

STATE REGISTRATION OF NURSES.

Lady Helen Munro Ferguson presided at a public meeting held on Feb. 21st at the Caxton Hall, Westminster, London, in support of State registration of trained nurses. A resolution was passed urging upon the Government and Parliament the pressing necessity for an Act for the registration of trained nurses. Letters were received from Sir Victor Horsley and Dr. H. W. L. Browne expressing their entire sympathy with the object of the meeting and Dr. T. B. Hyslop of the Bethlem Royal Hospital delivered a speech advocating the claims of asylum-trained nurses. The recognition of nurses in fever hospitals was urged by Dr. J. T. Biernacki and the meeting was also addressed by Dr. Bedford Fenwick.

AN OLD MEDICAL BOOK.

To the Editor of THE LANCET.

SIR,—I have a very old medical book which has belonged to my family for a good many years. On the outside is "Bates' Pharmaca." The measurements of the book are 7½ inches by 4¼ inches and it is in old English print. On the front page is the dedication as follows: "To the most Serene and Mighty Monarch William III., King of England, Scotland, France, and Ireland. Great Sir, I bring to your Majesty a small work, a series of prescriptions in the Medical Art, yet possibly the Greatest in its kind for excellency and usefulness, that ever any age produced, a collected summary of the choicest Secrets in Physick yet known, and what all the professors thereof acknowledge as a spontaneous product from the universal stock of experience." The book is published by William Salmon, "From my house near Blackfriers stairs, London. 7 Jany, 1699," and is in very good condition though the leaves have turned yellow. If you could give me any information about it I should feel greatly obliged to you.

I am, Sir, yours faithfully,

Penrhiwceiber, Mountain Ash, South Wales, Feb. 29th, 1908. FRED W. WHEELER.

*** We do not know the sale-room value of this book or even if it has any sale-room value, but we have seen one of Salmon's medical books in a recent Munich catalogue priced 20 marks. William Salmon, a doctor of physic in the seventeenth century, published a great number of books, the principal of which are: (1) The Complete Physician, 8vo; (2) A Universal Herbal, folio; (3) Polygraphice, or the Arts of Drawing, Engraving, Etching, and Limning, 8vo; and (4) Compendium of the Theory and Practice of Physic, 8vo. According to the Dictionary of National Biography he lived from 1644–1713, and there may sometimes be difficulty in identifying his works as "the bibliography of them is complicated, several being reprinted with alterations, while the author's lists do not agree with one another and are devoid of dates." There are several of his books in the catalogue of the library of the Royal Medical and Chirurgical Society, London (now transferred to the Royal Society of Medicine), but none having exactly the title of the work inquired about. The Index Catalogue of the library of the Surgeon-General's Office, U.S. Army, contains the following entry:—"Bate (George), Pharmacopœia Bateana; or Bate's Dispensatory. Translated from the second edition of the Latin copy. Containing ..... the Arcana Goddardiana ..... To which are added ..... Goddard's drops, Russel's pouder, and the emplastrum febrifugum. By William Salmon. 8p. l., 985 pp., 91. 8°. London: S. Smith and B. Welford, 1694." Our correspondent's book seems to be a later edition (1699) of this work.—ED. L.

A CHANCE FOR THE I.M.S.!

THE following advertisement is culled from an Indian contemporary:—

Rs.200 REWARD.

THE ABOVE WILL BE OFFERED to one who will permanently cure a native lady suffering monthly from severe palpitation of heart, which is subject to 15 years' chronic Hysteria.

The case can be handed only to diplomaed Kaverajes, Doctors, Hakims or Specialists.

Apply to Box 3989, Advt. Dept., "Statesman."

On considering the case we are not inclined to think that the offer is at all too liberal.

THE JAPANESE CASUALTIES IN THE LATE WAR.

A CORRESPONDENT writes:—In the considerable number of books on the war between Russia and Japan which have been published in this country very little can be gleaned regarding the losses of the latter power. The following returns, collated by Dr. Koike Masano, chief surgeon of the Japanese army, and recently published, will come as a surprise to many who thought themselves conversant with the events of the campaign. The total casualties reached the enormous number of 632,690. Of these 97,387 were killed in action or died from wounds and the number of wounded is given as 260,812. Diseases of the field armies amounted to 236,223, while in Japan and Formosa 107,850 sick soldiers were reported. Over 10,000 men were engaged in attendance on the wounded and invalids.

One curious Japanese custom was exemplified after the capture of 203 Metre Hill, outside Port Arthur. The summit and slopes were covered with the mangled bodies of the combatants and a party of Japanese accompanied by medical officers went over the ground with a view of identifying their own men. When one was recognised, which was not often, as shot, shell, steel, and hand grenade had done their deadly work, a surgeon would cut out the pomum Adami of the fallen soldier in order to send it to his relatives at home. A Japanese soldier, when he knows he is to take part in a desperate assault, bathes, cleans his teeth, puts on clean linen, and generally adorns himself, so that if he falls he may make "a respectable corpse." The ancient Lacedemonian warrior who put on all his finery before going to battle was probably actuated by a similar motive.

It is worth recording that the officers of the Japanese General Staff are of opinion that a rustic, if physically sound, can be converted by six months' assiduous training into a first-class soldier.

THE DANGERS OF FLANNELETTE.

WE have to record another case of death occurring in medical opinion as the result of the ignition of dangerous flannelette. A cook in the service of Miss Ettie Sayer, M.B., at Upper Brook-street, Grosvenor-square, was wearing two flannelette petticoats when somehow or other she set light to her garments. She seems to have become frantic, for she refused to allow a carpenter who was working on the premises to assist her to extinguish the flames. Miss Sayer, however, with great courage and promptitude, managed to wrap her in a big rug and to extinguish the fire. She afterwards carried the unfortunate woman upstairs, put on her a nightdress soaked in olive oil, and injected morphine. Death, however, ensued shortly afterwards at St. George's Hospital. The coroner, Mr. Troutbeck, pointed out that it was quite easy to obtain flannelette which would not burn readily, but although so many reports of inquests were published showing the dangers of the ordinary flannelette people apparently continued to wear it. We have emphasised this warning in THE LANCET many times before and we must again do so. There are many situations easily to be imagined where the presence of people wearing these dangerous garments is not only a menace to their own lives and safety but to the lives and safety of many others. The jury rightly called attention to the bravery and resourcefulness of Miss Sayer who did all that was possible to avert the fatal issue.

THE POUDRO PENCIL.

THIS is a nickel-plated face-powder container somewhat in the form and size of an ordinary metal folding pen case. In the end of the lid is a blunt-pointed stopper kept in position by a spring inside the lid. When the stopper is tapped lightly it recedes a short distance up the barrel for a moment and permits a small quantity of the powder to escape from the case. It may be tapped on the hand, handkerchief, or chamois, and the powder can then be applied where required. When the container is empty it may be easily refilled with powder. It has been devised as a pocket-holder of powder for the complexion, for moist hands and chapped skin, and to facilitate the drawing on of gloves. The vendors state that the original idea was that it should be carried by ladies in their purses and handbags, but that the sales of the article have been made principally to dentists and medical men who are obliged to wash their hands very frequently. The pencil can be obtained at the price of 9*d.*, post free, from Messrs. Thomas Christy and Co., Old Swan-lane, Upper Thames-street, London, E C.

SOLUTIO CRESOLIS SAPONATA B.P.C.

"A. G.," for the editor of the *Pharmaceutical Journal*, writes:—"Your annotation in THE LANCET of Feb. 22nd, 1908, p. 576, on the Germicidal Efficiency of Liquor Cresolis Compositus, is likely to give rise to the impression that Mr. Ernest Quant used the liquor cresolis compositus B.P.C. in his experiments instead of solutio cresolis saponata B.P.C., which he actually used. The difference between the two preparations is very marked. The latter contains glycerine besides alcohol and as a consequence mixes better with water than the former, and further, the emulsion formed is of a more permanent character."

THE RELATION OF MUSCULAR ENERGY TO FOOD CONSUMPTION.

IN the obituary notice of Professor Karl von Voit, which appeared in THE LANCET of Feb. 29th, p. 681, reference was made to the respiration apparatus with which he and the late Professor von Pettenkofer made many important physiological experiments. A copiously illustrated article in the *Scientific American* of Feb. 22nd describes experiments made on somewhat similar lines by Professor Atwater and Professor Rosa of the Wesleyan University, Middletown, Connecticut, U.S.A., their object being to ascertain the relationship between the food consumed by a man and the energy developed by him in doing mechanical work. For this purpose the man was mounted on a stationary bicycle inclosed in a large box. The rim of the rear wheel, which was raised a little so that it could revolve freely, passed between two electro-magnets connected with a dynamo. The energy developed by the exertions of the rider was in this way transformed into electricity and in that shape measured. All the food and drink consumed was weighed. In

the result it was found that the rider developed mechanical energy equal to 21 per cent. of the calculated fuel energy of the food.

Ignorant.—The question is one which can only be answered satisfactorily by a solicitor, and all the circumstances must be detailed to him.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 5th, 1908.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Feb. 28	29·31	S.W.	0·04	70	44	37	38	39	Cloudy
,, 29	29·20	N.W.	0·07	73	42	33	...	33	Cloudy
Mar. 1	29 24	N.W.	0·08	57	40	36	36	39	Cloudy
,, 2	29 62	N.	0·09	63	43	33	35	36	Cloudy
,, 3	29 63	S.W.	0·01	52	43	34	36	36	Overcast
,, 4	29 63	E.	0·23	57	43	35	36	37	Overcast
,, 5	29 94	N.W.	...	58	42	36	36	37	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.).

TUESDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (11th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.).

THURSDAY (12th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.)

FRIDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

SATURDAY (14th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 20, Hanover-square, W.

TUESDAY.—*(Surgica Section).* 5.30 P.M., Mr. A. E. Barker: The Use of Lumbar Puncture in the Treatment of Otitic Meningitis.

WEDNESDAY.—*(Neurological Section).* 5 P.M., Clinical Meeting. Dr. W. J. Harris, Dr. P. Weber, Dr. E. Jones, Dr. P. Stewart, Dr. J. S. Collier, and others: Cases. Patients in attendance at 4.30 P.M.

THURSDAY.—*(Obstetrical and Gynæcologica Section).* 7.45 P.M., Dr. W. C. Swayne, Dr. G. Anderson, and Dr. Macnaughton-Jones: Specimens. Dr. A. Andrews and Dr. D. Maxwell: A Case of Difficult Labour with Remarks on the Frozen Sections of the Uterus. Dr. W. C. Swayne: Myomectomy during Pregnancy. Dr. J. H. Dauber: Large Retro-peritoneal and Subligamental Fibroid complicating Pregnancy.

FRIDAY.—*(Clinical Section).* 8.30 P.M., Mr. T. H. Kellock: A Case of Hermaphroditism in which the Uterus occupied the Sac of an Inguinal Hernia. Dr. F. P. Weber: A Case of Angina Pectoris with Aortitis. Dr. S. W. Carruthers: A Case of Purpura Hæmorrhagica with Fatal Result from Cerebral Hæmorrhage. Dr. J. P. Parkinson and Mr. J. S. Horsford: A Case of Cerebellar Tumour with Proptosis.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Discussion on the Diagnosis and Treatment of Fractures of the Long Bones (introduced by Mr. A. P. Gould).

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W.

THURSDAY.—8.30 P.M., Fleet-Surgeon E. B. Pickthorn, R.N., Hospital Ships.

CHELSEA CLINICAL SOCIETY, Chelsea Dispensary, Manor-street, Chelsea, S.W.

TUESDAY.—8.30 P.M., Annual Clinical Debate on Gonorrhœa in the Male, with Special Reference to Treatment. Mr. J. G. Pardoe: The Treatment of Gonorrhœa in its Early Stages. Mr. A. Baldwin: The Treatment of some of the Sequelæ of Gonorrhœa. Followed by General Discussion.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, 17, Bloomsbury-square, W.C.

TUESDAY.—8 P.M., Mr. H. R. Le Sueur: X Rays and the Passage of Electricity through Gases at Low Pressures.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos-street, Cavendish-square, W.

THURSDAY.—8 P.M., Mr. E. E. Henderson: Card Cases. 8.30 P.M., Adjourned Discussion on Mr. Paton's paper on Optic Neuritis in Cerebral Tumours. Dr. T. Henderson: Lantern Demonstration of the Venous Connexion of Schlemm's Canal. Dr. F. Fergus: Ptosis Operations. Mr. H. H. B. Cunningham: A Case of Microphthalmia.

CHILD STUDY SOCIETY LONDON, Parkes Museum, Margaret-street, W.

THURSDAY.—8 P.M., Dr. C. J. Thomas: Congenital Aphasia (Word Blindness and Word Deafness).

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.

FRIDAY.—Dr. E. W. Hope: The Results of the Methods adopted in Liverpool in the Direction of removing Insanitary Property and providing Dwellings for the Dispossessed. Followed by Discussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MONDAY AND WEDNESDAY.—5 P.M., Prof. R. Thompson: The Anatomy of the Long Bones relative to certain Fractures.

FRIDAY.—5 P.M., Prof. W. S. Handley: The Natural Cure of Cancer. (Hunterian Lectures.)

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East.

TUESDAY AND THURSDAY.—5 P.M., Dr. J. W. H. Eyre: Melitensis Septicæmia (Malta or Mediterranean Fever). (Milroy Lectures).

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. J. H. Sequeira: Clinique (Skin). 5.15 P.M., Lecture:—Mr. B. Harman: Contusions of the Eyeball.

TUESDAY.—4 P.M., Dr. L. Guthrie: Clinique (Medical). 5.15 P.M., Lecture: Dr. F. Langmead: Some Modern Methods of Infant Feeding.

WEDNESDAY.—4 P.M., Mr. M. White: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. A. H. Tubby: Surgical Diseases of Children.

THURSDAY.—4 P.M., Mr. Hutchinson: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. C. Mercier: Functional Disease and its Treatment.

FRIDAY.—4 P.M., Mr. E. Clarke: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, road, W.

MONDAY.—12 noon, Lecture:—Dr. Low: Pathological. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eye. 2.30 P.M., Operations. 5 P.M., Lecture:—Mr. Armour: Clinical.

TUESDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 12 noon: Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Pritchard: On the Vaccination Treatment of Infective Diseases.

WEDNESDAY.—10 A.M., Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M., Medical and Surgical Clinics. X Rays. 2.30 P.M., Operations. Dr. K. Scott: Diseases of the Eye. Dr. D. Robinson: Diseases of Women. 5 P.M., Lecture:—Mr. Armour: Clinical.

THURSDAY.—12 noon, Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eye. 2.30 P.M., Operations. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery.

FRIDAY.—10 A.M., Dr. M. Moullin: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. R. Lloyd: Anæsthetics.

SATURDAY.—10 A.M., Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M., Medical and Surgical Clinics. X Rays. 2.30 P.M., Operations. Dr. K. Scott: Diseases of the Eye. Dr. D. Robinson: Diseases of Women.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Cliniques:—10 A.M., Surgical Out-patient (Mr. H. Evans). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Throat, Nose, and Ear (Mr. H. W. Carson); X Ray (Dr. A. H. Pirie). 4.30 P.M., Medical In-patient (Dr. A. J. Whiting).

TUESDAY.—Clinique:—10.30 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Surgical Operations (Mr. Carson). Cliniques:—Surgical Out-patient (Mr. Edmunds); Gynæcological (Dr. A. E. Giles).

WEDNESDAY.—Cliniques:—2.30 P.M., Medical Out-patient (Dr. Whipham); Dermatological (Dr. G. N. Meachen); Ophthalmological (Mr. R. P. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations. (Dr. Giles). Cliniques:—Medical Out-patient (Dr. Whiting); Surgical Out-patient (Mr. Carson); X Ray (Dr. Pirie). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Lecture:—Dr. A. J. Whiting: Angioneurotic Œdema as a Familial Cause of Sudden Death.

FRIDAY.—10 A.M., Clinique:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M., Surgical Operations (Mr. Edmunds). Cliniques:—Medical Out-patient (Dr. Auld); Eye (Mr. Brooks). 3 P.M., Medical In-patient (Dr. M. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2.15 P.M., Sir Dyce Duckworth: Medicine. 2.30 P.M., Operations. 3.15 P.M., Mr. W. Turner: Surgery. 4 P.M., Dr. StClair Thomson: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 3.15 P.M., Special Lecture:—Mr. W. Turner: Alveolar Abscess.

TUESDAY.—2.15 P.M., Dr. R. T. Hewlett: Medicine. 2.30 P.M., Operations. 3.15 P.M., Mr. Carless: Surgery. 4 P.M., Mr. M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

WEDNESDAY.—2.15 P.M., Dr. F. Taylor: Medicine. 2.30 P.M., Operations. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical, 11 A.M., Eye. 3.30 P.M., Special Lecture:—Mr. Cargill: Paralytic Squint.

THURSDAY.—2.15 P.M., Dr. G. Rankin: Medicine. 2.30 P.M., Operations. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Mr. M. Davidson: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical 12 noon, Ear and Throat.

FRIDAY.—2.15 P.M., Dr. R. Bradford: Medicine. 2.30 P.M., Operations. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—2.30 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.

MONDAY.—9 A.M., Operations (Mr. White). 2.30 P.M., In-patients—Medical (Dr. Beevor); Out-patients—Medical (Dr. Willcox), Surgical (Mr. Low), Eye (Mr. Morton and Mr. Coats).

TUESDAY.—2.30 P.M., In-patients—Medical (Dr. Beale), Throat and Ear (Mr. Waggett); Out-patients—Surgical (Mr. Edmunds), Throat and Ear (Mr. French); Operations (Mr. Beale).

WEDNESDAY.—2.30 P.M., In-patients—Surgical (Mr. Stabb); Out-patients—Medical (Dr. Horder), Gynæcological (Dr. Lockyer), Skin (Dr. Whitfield), Teeth (Mr. Baly); Operations (Mr. Stabb).

THURSDAY.—2.30 P.M., In-patients—Medical (Dr. Morison).

FRIDAY.—3.30 P.M., Lecture:—Mr. P. Baly: A Few Points in Preventive Dentistry and the Care of the Teeth.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Lecture:—Dr. Batten: Subacute Combined Degeneration of Spinal Cord.

FRIDAY.—3.30 P.M., Lecture:—Mr. Paton: Ocular Paralysis.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, W.C.

THURSDAY.—6 P.M., Lecture:—Dr. M. Dockrell: Ul-erythema—I., Centrifugum; II., Telangiectic; III., Ophryogenes.

CHARING CROSS HOSPITAL.

THURSDAY.—3 P.M., Demonstration:—Dr. Galloway and Dr. MacLeod: Diseases of the Skin. 4 P.M., Demonstration:—Mr. Forsyth: Medical. (Post-Graduate Course).

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.

WEDNESDAY.—4 P.M., Lecture:—Dr. D. Grant: Demonstration of Cases from the Throat Department.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.

THURSDAY.—4 P.M., Lecture:—Mr. A. Lane: Fractures in Children.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1907, which was completed with the issue of Dec. 28th, were given in THE LANCET of Jan. 4th, 1908.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1907 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

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